The Yakama Nation Comments on Bonneville Power Administration's Power Function Review II Close-out Letter

April 21, 2006

Introduction

The Yakama Nation has participated actively in the first Power Function Review and this second process. Our goal was to help BPA include the best information available on its future costs. We are concerned that BPA did not include important information from the Yakama Nation in the initial process and has not adequately addressed future fish and wildlife costs in this revision.

Our comments show that BPA has not adequately addressed future fish and wildlife costs. We provide specific examples where BPA has not provided adequate funding to implement the FCRPS Biological Opinion. This will make it unlikely that the actions in the BiOp will be reasonably likely to occur. BPA has also assumed river operations based on the 2004 Biological Opinion even though this document has be found to violate the Endangered Species Act and the Court has ordered additional spill operations. We also provide analysis that BPA has not provided adequate funding to implement the Columbia River Basin Fish and Wildlife Program developed by the Northwest Power and Conservation Council pursuant to the Northwest Power Act. We provide analysis that the projects identified by the fish and wildlife managers have significantly higher costs than BPA has assumed.

Our comments show that BPA is not achieving the Biological Objectives of the Columbia River Basin Fish and Wildlife Program. The Federal agencies have not stopped the decline of salmon and steelhead in the Columbia Basin. At the current pace of implementation, it will be impossible to restore the widest possible set of healthy naturally reproducing populations of salmon and steelhead by 2012 or to increase salmon and steelhead populations above Bonneville Dam to five million fish by 2025.

Our comments demonstrate that BPA does not have rate adjustment strategies to address higher fish and wildlife costs. These increases will reduce BPA's ability to repay the Treasury. The Yakama Nation is concerned that when BPA has been faced with the prospect of failing to make a Treasury payment, it has cut fish and wildlife protection instead. This happened in 1995 and 2001.

The Yakama Nation also raises concerns that BPA's PFR 2 process is not coordinated with the rate case. Bonneville's process for determining its total system costs is not consistent with the Northwest Power Act. Bonneville's process for determining its total system costs is not consistent with the Administrative Procedures Act. Finally, Bonneville's Power Function Review process is not consistent with the Northwest Power Act.

We also raise concerns about the refinancing of the Energy Northwest debt on the nuclear plant and BPA's plan to provide subsidies to the Direct Service Industries while deferring fish and wildlife obligations under federal laws and treaties.

Comments in the initial Power Function Review

The attached comments from the initial PFR process in 2005 describe the Yakama Nation's interest in fish and wildlife funding and the treaty rights of the Yakama Nation. It describes BPA's fish and wildlife related financial commitments and fiduciary responsibilities. It details BPA's responsibilities under the Northwest Power Act and the Columbia River Basin Fish and Wildlife Program.

The comments also document the efforts by fish and wildlife managers to develop detailed cost estimates for FY 2007-2009. The CBFWA Workgroup analysis is the best information available and is based on realistic assumptions. Implementation of our recommendations would provide significant benefits for fish and wildlife and provide thousands of jobs in rural and tribal communities while keeping BPA rates 37 percent below market prices.

The comments also analyzed BPA's proposal for the integrated program and described a number of flaws. BPA did not base its budgets on the best information available. Many of its assumptions are unrealistically low. BPA's budget is not adequate to implement the Biological Opinion or the Council Program; it has not addressed hatchery reform; and it does not address other fish and wildlife needs. The comments also described how BPA's accounting for operational impacts was flawed. It also detailed BPA's responsibilities to implement the Council's Program.

The Yakama Nation concluded that BPA's assumptions about its fish and wildlife costs were not adequate to meet its obligations under the Northwest Power Act, the Endangered Species Act, or its trust responsibilities under our Treaty. We have attached our May 20, 2005 comments and incorporate them into these comments by reference.

BPA has not adequately addressed future fish and wildlife costs

BPA has not addressed implementation of the Biological Opinion remand

In 2003, the Federal District Court struck down the 2000 Biological Opinion on the FCRPS. One of the major concerns was that the Reasonable and Prudent Alternatives called for in the Biological Opinion were not reasonably certain to occur. In 2005, the same Court struck down the 2004 Biological Opinion and ordered the federal action agencies to prepare a new biological opinion. One of the issues that action agencies must address will be a demonstration that the actions in a new biological opinion will be reasonably certain to occur.

The Yakama Nation has participated in the remand process and several facts are clear. First, the gap between the recovery level and the current population levels is large for

almost all of the listed species. Second, the hydroelectric system is responsible for a large percentage of the damage to the listed populations. Third, significant additional efforts in habitat, production, and other measures will be needed to fill the gap between current population levels and the recovery level.

Habitat and Production: Despite these facts, BPA has not assumed any additional funding for implementation of the new Biological Opinion in its Integrated Fish and Wildlife Program. This is a serious flaw in the PFR 2 process and should be corrected in the final report.

River Operations: BPA has also used the wrong assumptions about river operations. In the rate case, BPA has assumed the river operations in the 2004 Biological Opinion will continue through 2009. However, the Court has ordered additional spill levels in 2005 and 2006 to protect migrating fish. Given the survival gap discussed above, BPA's assumption that river operations will provide less protection through 2009 is unreasonable. BPA has estimated that the additional spill operations in 2006 will reduce its revenues by about $60 million. BPA should assume continuation of the Court-ordered operations in its base rates through FY 2009. It should also develop rate adjustment mechanisms that would accommodate additional spill and flow protections that may be part of a future Court order or the remand process.

Implementation of the new Biological Opinion: As we move from planning into implementation the Federal government must ensure that the recovery actions are reasonably likely to occur. Unfortunately, BPA has not address the funding for the implementation of salmon recovery actions, or yet determined who will bear the major burden of recovering these fish. Congress is growing tired of appropriating funds and seeing little result. So are we. It is well known that salmon recovery will cost considerably more than is now available from the federal action agencies and that the true source of this crisis—dam mortality—must be adequately addressed in order to complement further spending.

As the major source of salmon mortality, the federal hydroelectric power system has the main responsibility for funding and providing salmon recovery. The Yakama Nation has been very active in Bonneville's current rate case, asserting the principle that Bonneville must set its rates in the next rate period high enough to ensure that both its federal Treasury payments are made and salmon recovery will be adequately funded. So far BPA has not addressed our concerns and in many instances prevented our testimony on these issues from even being included in the record. We have attached a copy of our rate case testimony to these comments and incorporate them by reference.

BPA's priority is to maintain power rates at 40% below market prices and provide no additional funding for the increased costs we all know will be needed for salmon recovery.

During the PFR 2 process, we requested analysis from BPA on how it would address the additional fish and wildlife costs in the Biological Opinion and new NOAA Fishery

Service Recovery Plans. BPA has asserted that its funding allows for significant implementation of its offsite mitigation responsibilities, but has not provided the analysis we requested.

BPA has not addressed full implementation of the Columbia River Basin Fish and Wildlife Program.

The Yakama Nation comments in the initial PFR process provided detailed analysis of the costs of fully implementing the Northwest Power and Conservation Council's Columbia River Basin Fish and Wildlife Program, including the subbasin plans. BPA did not incorporate this information into the PFR report or the revenue requirements in the rate case. As a result, BPA's costs are not based on the best available information and are not sufficient to meet its total system costs.

Our analysis found that it would take 40 to 80 years to implement the actions in the Council's Program and subbasin plans at the funding levels that BPA has assumed.

BPA has not addressed the adequacy of its Integrated Fish and Wildlife Program

BPA's Integrated Fish and Wildlife Program is supposed to fund both Northwest Power Act and Endangered Species Act activities. BPA has not addressed specific funding needs for these activities:

Research, Monitoring, and Evaluation: In the Yakama Nation comments on the initial PFR process we noted that BPA had assumed a significant reduction in funding for research, monitoring, and evaluation. Our analysis showed that, adjusted for inflation, BPA was assuming a reduction in the current service level of $12 million—approximately 30 percent.

During PFR 2, we requested any information or analysis that shows that BPA can implement the requirements for these activities in the FCRPS Biological Opinions and the recommendations of the Independent Science Review Panel. BPA has not provided any details on the RM&E activities that would be reduced or eliminated or how it would meet the measures in the Biological Opinion and Council Program. Given the requirements for these activities, the reductions that BPA has assumed are unrealistic.

Information Management, Coordination, and Administration: BPA has proposed a reduction of $2.9 million. Yet since the initial PFR process, these costs have actually increased. For example, BPA is continuing to fund the Fish Passage Center while also funding a duplicate contracts that will add to the costs in this category We find it unlikely that the region collectively, or BPA unilaterally, will decide to eliminate and/or substantially cut these efforts in sufficient time to realize the projected reductions by FY 2009.

We also note that BPA's proposal acknowledges the many additional steps that must be negotiated before funding decisions will be made. This will delay decisions to reduce

current RM&E and IMCA costs at least until FY 2008, mid-way through the rate period.

Mainstem: BPA's proposal would reduce these activities by $700,000; however, adjusted for inflation the real reduction would be approximately $1.8 million per year. BPA's assumptions run counter to the increased requirements for mainstem activities in the Biological Opinion and the NPCC mainstem amendments. BPA has not provided any analysis for its funding level and has not demonstrated that it is adequate to implement the Council Program or Biological Opinion.

Production: BPA assumes a $2.3 million increase for production; without inflation, this funding level would mean that the production activities identified in the subbasin plans would take approximately 22 years to complete. However, adjusted for inflation BPA's proposal is actually a $6 million reduction in current services levels. This raises a concern about maintaining current activities and would leave no additional funds for new production strategies called for in the subbasin plans. BPA has not provided any basis for its funding level; there is no relationship to the cost estimates developed by the CBFWA workgroup.

Habitat: BPA's proposal shows an increase of approximately $12.7 million for current habitat and new Biological Opinion and subbasin plan implementation. Using BPA's assumption of a 1.5 percent inflation rate, this is a real increase of approximately $8.8 million. Using a more realistic inflation rate for the cost of land and water acquisitions and easements of 6 percent, the real purchasing power is actually reduced by $5 million per year. BPA has not provided any basis for its funding level; there is no relationship to the cost estimates developed by the CBFWA workgroup.

It is important to note that the ongoing costs (operations and maintenance, etc.) for habitat activities are approximately $12 million per year. Therefore, with modest inflation it would take about 45 years to implement the strategies in the subbasin plans based on the costs identified by the CBFWA workgroup; this assumes that there would still be habitat available for purchase in forty years. Using more realistic inflation assumptions, BPA's proposed pace of implementation would take approximately 80 years to complete these strategies.

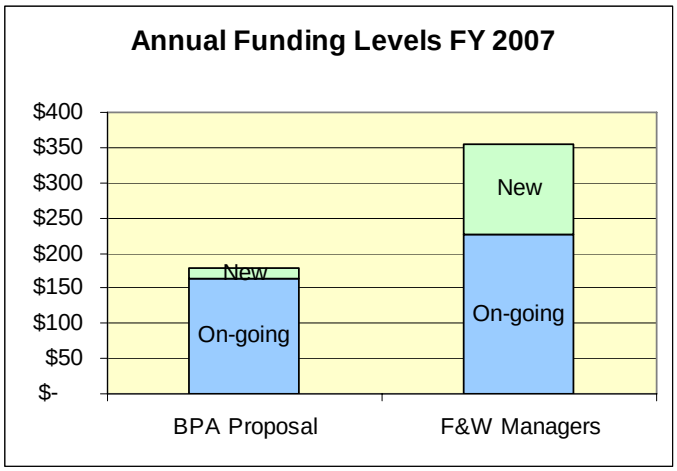
Efficiencies: BPA relies on the assumption that there are a number of projects that are unnecessary in the Integrated Program and it can reprogram funding from such projects. The NPCC, CBFWA, and ISRP went through an exhaustive effort as part of the Provincial Review in 2003 to evaluate all of the ongoing and proposed activities for the Integrated Program. The Provincial Review identified funding needs of approximately $300 million per year, yet BPA has capped funding at $139 million. The priority setting process has carefully reviewed the priorities and effectiveness of the current activities; assumptions that there are a number of unnecessary projects that can be cut are unrealistic.

FY 2007 Costs: The fish and wildlife managers recently reviewed proposals for projects for FY 2007-2009. The table below compares the funding for FY 2007 for each province with the funding levels in the Council allocation of the BPA budget levels.

CBFWA Project Cost Information

Province	FY07 Ongoing	FY07 New	Council Annual
Blue Mountain	$18,642,311	$7,191,785	$7,127,528
Columbia Cascade	$10,610,100	$15,559,446	$3,001,663
Columbia Estuary	$4,022,648	$1,909,738	$3,662,490
Columbia Gorge	$14,603,364	$3,316,245	$5,312,554
Columbia Plateau	$37,922,502	$14,898,988	$21,748,203
Intermountain	$25,066,194	$6,637,735	$15,248,105
Lower Columbia	$7,843,307	$15,692,749	$2,492,862
Middle Snake	$4,677,822	$7,684,883	$3,374,079
Mountain Columbia	$17,598,441	$1,824,154	$12,590,537
Mountain Snake	$24,421,465	$28,748,557	$16,761,459
Upper Snake	$2,696,379	$1,265,100	$1,575,022
Systemwide/ MultiProvince	$57,608,224	$23,740,672	$46,055,498
Subtotal	$225,712,757	$128,470,052	
Total	**$354,182,809**		**$131,822,472**

The figure below compares the ongoing and new funding identified by the fish and wildlife managers with the funding levels that BPA has assumed for the Integrated Program.



This analysis shows that the fish and wildlife managers would have to cut on-going projects by approximately 20 percent and eliminate all new projects to be able to meet the BPA budget levels. This is not a realistic assumption for implementing the Biological Opinion or the Council Program.

BPA is not achieving the Biological Objectives of the Columbia River Basin Fish and Wildlife Program.

Biological Objectives: BPA asserts in the PFR 2 draft closeout report that it is committed to fulfill its fish and wildlife obligations through managing to clearly defined performance objectives and implementing the most cost effective strategies to meet these objectives[1]. BPA provides no analysis to describe its objectives or its progress in achieving them.

The Biological Objectives of the Columbia River Basin Fish and Wildlife Program are:

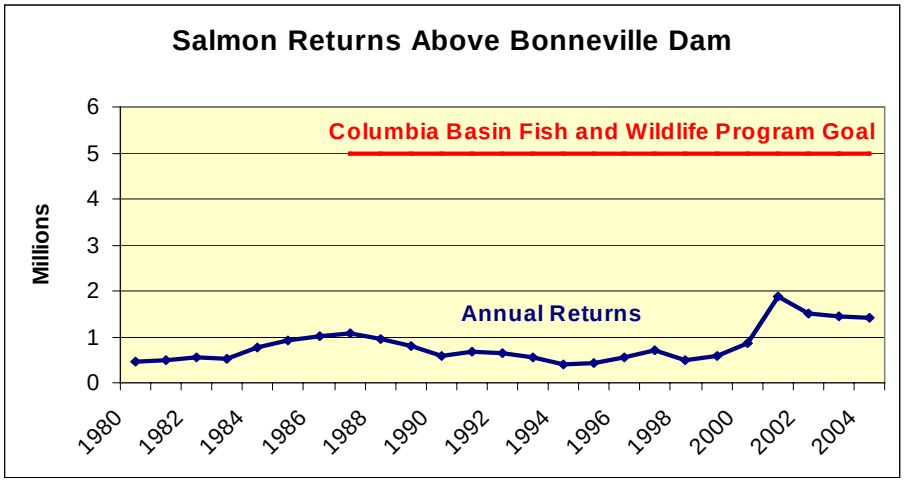
- First, stop the decline of salmon and steelhead populations above Bonneville Dam by 2005.
- Second, restore the widest possible set of healthy naturally reproducing populations of salmon and steelhead in each relevant province by 2012.
- And third, increase returning salmon and steelhead to an average of five million adults returning above Bonneville Dam by 2025 in a manner that supports tribal and non-tribal harvest[2].

The Program also set goals for the substitution of anadromous fish losses, resident fish losses, and wildlife losses.

The ultimate goal for the Federal government should be to address the requirements of the Endangered Species Act, the Northwest Power Act, and the Treaties, Executive Orders, and other commitments made to Indian tribes in the Columbia Basin. In the case of salmon and steelhead, we seek to achieve the dual goals of recovery and delisting of salmonids listed under provisions of the ESA and the restoration of salmon populations to levels that provide a sustainable harvest sufficient to allow for a meaningful exercise of tribal fishing rights.

Failure to achieve the Biological Objectives: The figure below shows that many salmon and steelhead populations actually declined in the 1990s. The runs size in 2003 was about the same as the average between 1976 and 1981 and has declined in 2004 and 2005. As we submit these comments, only 300 spring Chinook have passed Bonneville Dam in 2006; this has caused significant problems in providing enough fish for tribal first salmon ceremonies.

[1] Draft Closeout report, page 7.
[2] See of the 2000 Columbia River Basin Fish and Wildlife Program, page 16 and 17.



A review of the status of wild salmon and steelhead listed under the Endangered Species Act shows that most listed stocks continue to decline. A declaration by Gretchen Oosterhout, Ph.D. for the current litigation regarding the FCRPS Biological Opinion found:

- Columbia and Snake River salmon and steelhead still face an immediate and substantial threat to their continued existence.
- Although some ESUs have experienced short-term increases in adult returns, all ESA-listed ESUs are still experiencing a long-term population decline and remain at significant risk, especially in terms of abundance (number of adults) and productivity (reproductive success rate).
- The 2004 FCRPS BiOp itself shows that upper basin ESUs have fallen to such seriously low levels that only one major population group still exists for four of the 6 upper basin ESUs, and only one population exists for the other two.
- In NMFS' last published report on the status of Upper Columbia River Steelhead before it issued the 2004 FCRPS BiOp, NMFS found that the level of survival improvement still required to achieve recovery targets was "high" and that "…the natural survival rate would have to increase nearly seven-fold to meet the indicator criteria under all assumptions and for all spawning aggregations" (Toole 2003, p. 8). NMFS' assessment of this ESU in the 2004 FCRPS BiOp is no more encouraging (NMFS 2004, section 8.8).
- Only one major population of Upper Columbia River steelhead remains, and although the last few years have seen higher adult returns, its long-term trajectory is still a fairly dramatic decline (population growth rates for sub-populations of 0.63 to 0.93, depending on assumptions, with a mean of 0.76 – or a 24% long-term decline since 1980) (Toole 2003, Table 13). [A growth rate below 1.0 indicates that the population is not replacing itself and is declining].
- The long term population growth rate calculated from 1980 to 2003 for Upper Columbia River steelhead overall is currently about 13% lower than when NMFS calculated it in the 2000 FCRPS BiOp.

- The Snake River steelhead ESU faces a similarly serious decline. NMFS recently estimated an aggregate population growth rate of 0.73 to 0.87 (Toole 2003, Table 9), or a decline of 13% to 27% per year.[3]

BPA is not meeting the biological objectives of the Council Program. Based on the analysis of total runs size and the status of ESA listed stocks, the Federal agencies responsible for implementing the NPCC Program (BPA, the Corps of Engineers, the Bureau of Reclamation, and the Federal Energy Regulatory Commission) have not stopped the decline of fish and wildlife populations by 2005. At the current pace of implementation, it will be impossible to restore the widest possible set of healthy naturally reproducing populations of salmon and steelhead by 2012 or to increase salmon and steelhead populations above Bonneville Dam to five million fish by 2025.

Cost effectiveness: The Yakama Nation supports efforts to restore fish and wildlife as quickly and effectively as possible. However, it is important to recognize that cost-effectiveness is a function of the cost of a measure and its ability to produce a given result, compared to other measures in achieving a specified objective. In analyzing cost-effectiveness, all available measures would be displayed on a supply curve. If the results, in this case additional fish and wildlife, exceed the goal (for example, five million fish returning above Bonneville Dam) then cost-effectiveness analysis would select the least-costly measures needed to achieve the goal.

The standard in Section 4(h)(6)(C) requires the Northwest Power and Conservation Council to "utilize, where equally effective alternative means of achieving the same sound biological objective exist, the alternative with the minimum economic cost." At this point, neither BPA nor the Council (nor anyone else) has demonstrated (or even asserted) that the measures in Program, including the subbasin plans, will achieve or exceed the biological objective of the five million fish established in the 1987 and 2000 Columbia River Basin Fish and Wildlife Program, pursuant to the Northwest Power Act. Therefore, there are no equally effective means to achieve the same sound biological objective and it is not appropriate to eliminate or limit measures based on cost-effectiveness analysis.

BPA's proposed rate adjustments will not address future fish and wildlife funding

BPA' has said that its proposed rate adjustment mechanism will address added fish costs. This is not accurate. The Yakama Nation provided evidence in the BPA rate case that demonstrated that BPA could not increase its costs and still assure repayment of its debts to the U.S. Treasury. The table below shows the results of several cases where additional ESA costs lower BPA's ability to repay the Treasury.

[3] Third declaration of Gretchen Oosterhout, Ph.D. dated February 10, 2005

Treasury Payment Probability	Initial Proposal	Revised Proposal
BPA Goal	**92.6%**	**?**
Additional $50 million ESA	88%	**?**
Additional $100 million ESA	83%	**?**
Additional $200 million ESA	75%	**?**

Everyone in the Northwest has a strong interest in making sure that BPA can make its Treasury payments. Failure to do so would focus national attention on BPA's low rates, compared to other parts of the country. The Yakama Nation is also concerned that when BPA has been faced with the prospect of failing to make a Treasury payment, it has cut fish and wildlife protection instead. This happened in 1995 and 2001.

BPA responded to our testimony by proposing an emergency surcharge provision for ESA costs, but admitted that it had done no analysis regarding whether the proposal will ensure that BPA can make its Treasury payments. BPA has also placed restrictions on the proposed rate adjustments that could lead to a situation where BPA once again curtails fish protections will offering rates that are well below market prices.

The BPA rate adjustments also do not address additional fish and wildlife costs. The NFB adjustment and emergency NFB surcharge only apply to BiOp litigation-related costs. The only risk mitigation available to address other fish and wildlife costs, such as implementation of the Council Program, the new NOAA recovery plans, or other federal laws is the CRAC; the Yakama Nation analysis showed that this mechanism was not adequate to maintain BPA's Treasury Payment Probability goal if BPA experiences higher costs.

BPA's PFR 2 process is not coordinated with the rate case

The Federal Register Notice (FRN) for the BPA rate case proceeding describes the scope, process, and issues to be considered. 215 Fed. Reg. 67685 (November 8, 2005). In Part II—Purpose and Scope of Hearings the FRN provides an overview and background on this rate filing and describes a number of processes, including the Power Function Review. In the rebuttal testimony, BPA further elaborates that:

> "BPA will update the final [rates] studies to reflect the most current operational and programmatic assumptions for the FY 2007-2009 rate period as well as BPA's fish and wildlife program financial obligations identified through the Power Function Review 2 process"[4]

[4] WP-07-E-BPA-34, page 3

The Bonneville testimony also states that "BPA is committed to conducting an additional public process to review program spending levels that will be concurrent with this rate proceeding so that any reduction in spending levels can be incorporated in the final proposal." PFR 2 is BPA's second process to review its costs. Likewise, in its rebuttal testimony, BPA states that, "BPA will update the final studies to reflect the most current operational and programmatic assumptions for the FY 2007-2009 rate period as well as BPA's fish and wildlife program financial obligations identified through the Power Function Review 2 process".[5] As we have documented above, PFR 2 has not adequately addressed fish and wildlife program financial obligations.

The schedule for PFR 2 is not coordinated with the deadlines of this rate proceeding. For example, the draft close out letter for PFR 2 was released on April 4, 2006 and comments are due on April 26, 2006. Any final "decision" will occur after the deadline for rate case briefs.

BPA conceded in the rate case that "No Record of Decision exists for the Power Function review or for the Power Function Review 2" and that "the PFR 2 process is not complete."[6] The schedule of the PFR 2 and the Rate Case is such that the Tribes are effectively precluded from rebutting any of the outcomes of the PFR 2 process as they may be reflected in the Administrator's rates decisions. This is inconsistent with the explicit congressional direction in section 7 of the Northwest Power Act and the constitutional rights to be heard.

Bonneville's process for determining its total system costs is not consistent with the Northwest Power Act.

Bonneville is arbitrary in updating information that it will rely on in the rate case. It has limited PFR 2 to "any reduction in spending levels." Increases in spending levels would clearly be relevant to determining Bonneville's total system cost, yet it appears that the Bonneville processes (PFR2 and by extension the rates proceedings) exclude such information. This is patently arbitrary.

Bonneville is also arbitrary in determining which issues were "decided" in PFR 1 and which are open for further discussion in PFR 2. The draft PFR 2 close out letter addresses a number of the issues, but not all of the issues described in the FRN. It appears that Bonneville's process is designed to exclude rebuttal from parties relevant to total system costs unless the comments relate to reductions in costs or Bonneville, in its sole discretion, wants to consider new information.

Bonneville's process for determining its total system costs is not consistent with the Administrative Procedures Act.

[5] Id.
[6] See data responses JP13-BPA-002 and -003

Bonneville's decision to categorically exclude rebuttal testimony related to its fish and wildlife costs is inconsistent with the Administrative Procedure Act, which excludes only "irrelevant, immaterial, or unduly repetitious evidence." 5 U.S.C. § 556(d). As a basic principle all parties should have the opportunity to meet in the appropriate fashion all materials that influence the Administrator's decision. *See generally,* Davis, Administrative Law Treatise §15:15 (Procedures for Challenging Facts an Agency Uses in an Adjudication). Moreover, the Northwest Power Act is specific in this regard, allowing any party to rebut information put forward by BPA.

Bonneville's Power Function Review process is not consistent with the Northwest Power Act.

Bonneville has treated some portions of PFR as final actions but has not issued a record of decision and provided an opportunity for judicial review. The Yakama Nation provided comments during the PFR that decisions in the Power Function Review do not appear to fit in the list of final actions subject to judicial review under 16 USC 839g (e). In fact BPA has prepared no Record of Decision for the PFR. Moreover, the PFR 2 has yet to be concluded. BPA's PFR and ratemaking procedures effectively hides its fish and wildlife costs from the scrutiny envisioned by the Northwest Power Act.

BPA cannot refuse to make a final decision on the PFR issues while relying on the PFR outcomes in its testimony in the rate case, on the one hand, and exclude these issues from examination in the rate case on the other. Such procedures deny the Yakama Nation due process rights to be heard and are inconsistent with the APA and the Northwest Power Act.

If BPA believed that the PFR was a final decision under Section 9(e) it should have clearly stated its reasons and prepared a record of decision that could be challenged in the Ninth Circuit Court of Appeals. BPA cannot have things both ways and shield itself from judicial challenge on it failure to meet its fish and wildlife obligations under Federal laws and Treaties.

Refinancing the Energy Northwest debt

The Energy Northwest Executive Board approved an extension of the debt on the Columbia Generating Station from 2018 to 2024; this provides a savings of $17 million per year. This was the largest decrease in costs identified in the PFR 2 process.

In past meetings with BPA managers, tribal leaders had been told that once the repayment of the nuclear plants were complete, additional funding would be available for fish and wildlife recovery. We would like assurances from BPA that the debt extension will not have any impact of the funding and schedule of needed fish and wildlife activities.

DSI subsidy

BPA is proposing an annual subsidy for the Direct Service Industries of $59 million. Under the Northwest Power Act, BPA is only required to offer these customers an initial 20 year contract. That requirement expired in 2001.

We do not support BPA funding for an activity where it has no legal requirement when it is limiting fish and wildlife funding in contradiction to clear legal and trust obligations.

Conclusions

BPA needs to include adequate funds for fish and wildlife in its next rate case.

- Implementation of the NPCC subbasin plans and including wildlife mitigation over a ten-year period will cost between $1.5 and $2 billion.
- The total cost to implement the Fish and Wildlife Program and associated ESA needs is estimated to be about $240 million per year. Implementation of the Biological Opinion and recovery plans will likely increase these funding needs.
- Carrying out the subbasin plans would only accomplish between one-quarter and one-half of the habitat work needed in the tributaries of the Columbia and Snake Rivers.
- At the current BPA Integrated Program funding rate of $139 million per year, it would take 40 to 80 years to implement the NPCC Fish and Wildlife Program.

Therefore, BPA should increase the amount of funds available for fish and wildlife activities to approximately $240 million per year.

The fish and wildlife managers have developed realistic and reasonable cost estimates for the rate case period. BPA should ramp up its Integrated Fish and Wildlife Program budget:

- $200 million in FY 2007;
- $225 million in FY 2008;
- $240 million in FY 2009.

BPA should develop a more flexible capitalization policy to facilitate land and water acquisitions.

- BPA's current policy on capitalization is unclear regarding the use of its borrowing authority to purchase land and water.
- BPA's interpretation of its policies has inhibited the implementation of the Fish and Wildlife Program.
- If BPA uses its borrowing authority for these kinds of purchases, the rate impacts of our recommendations are significantly reduced.

Therefore, BPA should modify its capitalization policy to set up mechanisms to allow borrowing funds or the use of its borrowing authority to purchase land and water.

BPA should address the uncertainties in fish and wildlife costs in its rate case.

- The fish and wildlife managers note that with the intent of providing these estimates of future budget needs, that these estimates do not incorporate numerous factors that may increase the needs, and that these budget targets are likely to be under-estimates of actual needs.
- In the previous rate case BPA used two means to address uncertainties: Cost Recovery Adjustment Clauses and revenue collection to meet more than the minimum need.

Therefore, BPA should work with others to ensure its rates provide adequate fish and wildlife funding. BPA's rate provisions must ensure that it can adequately fund future additional fish and wildlife costs and assure repayment to the U.S. Treasury.

BPA must meet the goals of the Fish and Wildlife Program.

- After considerable analysis, the NPCC adopted in 1987 an interim estimate of the hydropower (BPA) responsibility to fish and wildlife of 5 million returning adult salmon and mitigation for resident fish and wildlife.
- The Program also identifies specific goals for resident fish and wildlife mitigation to address the operation and construction of dams and inundation by reservoirs.
- The NPCC reaffirmed these responsibilities in adopting its amended Fish and Wildlife Program in 2000.
- BPA is not achieving the biological objectives in the Program and must accelerate its efforts.

Therefore, the funding recommended by the fish and wildlife managers through FY 2009 is not likely to exceed costs necessary to achieve the Fish and Wildlife Program goals.

Full implementation of the F&W Program and ESA activities will create economic benefits in tribal and rural areas.

- Most of the fish and wildlife activities would be implemented in rural areas east of the Cascade Mountains creating jobs and additional economic activity.
- As fish and wildlife populations increase as a result of these BPA investments, east-side rural areas will experience increased fishing, hunting and related activities, also creating additional jobs and invigorating local economies.
- BPA can implement these fish and wildlife measures and still have rates that are significantly below the market prices for electricity.

Therefore, BPA should recognize the benefits to rural and tribal communities from its investments in fish and wildlife.

UNITED STATES OF AMERICA
U.S. DEPARTMENT OF ENERGY
BEFORE THE
BONNEVILLE POWER ADMINISTRATION

IN THE MATTER OF THE PROPOSED WHOLESALE POWER RATE ADJUSTMENT PROCEEDING OF THE BONNEVILLE POWER ADMINISTRATION	)))))	BPA DOCKET NO. WP-07

DIRECT TESTIMONY
OF THE
COLUMBIA RIVER INTER-TRIBAL FISH COMMISSION
NEZ PERCE TRIBE AND
YAKAMA NATION

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January 20, 2006

Exhibits:
WP-07-E-CR/NZ/YA-01

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TESTIMONY OF:

EXPERT PANEL: EDWARD SHEETS, JAIME PINKHAM AND ROY SAMPSEL

WITNESSES FOR:

THE COLUMBIA RIVER INTER-TRIBAL FISH COMMISSION,

THE NEZ PERCE TRIBE, AND THE YAKAMA NATION

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Section 1. Introduction and Purpose of Testimony

Q. PLEASE IDENTIFY YOURSELF.

This panel is comprised of Edward W. Sheets, Jaime Pinkham and Roy Sampsel. We are appearing on behalf of the Columbia River Inter-Tribal Fish Commission, the Nez Perce Tribe, and the Yakama Nation (the Tribes). See WP-07-Q-CR/NZ/YA-01 and WP-07-Q-CR/NZ/YA-02

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of our testimony is to provide evidence on the effects of Bonneville's rate proposal on the probability of repaying Bonneville's debt to the Treasury while meeting its other obligations including its fish and wildlife costs, and trust obligations to Indian tribes. We provide evidence on the costs and uncertainties Bonneville faces. We provide evidence that Bonneville's cost adjustment mechanisms are not adequate to assure repayment to the Treasury after meeting its costs. We will also provide evidence on how Bonneville can meet its future costs and still remain competitive.

Q. HOW DOES THIS TESTIMONY RELATE TO PREVIOUS RATE CASE TESTIMONY?

A. CRITFC and the Yakama Nation were parties in the WP-02 and SN-03 rate cases. During those processes, they raised concerns that BPA was using optimistic assumptions about its costs and revenues, that BPA was not using the best available information about its total system costs, and that BPA's proposal was

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not adequate to meet its costs and assure repayment to the Treasury. The result was that the BPA proposal increased the risk that BPA would face an unpalatable choice: defer payments to the Treasury or defer fish and wildlife protections.

One of our major concerns was that Bonneville's proposal did not cover total system costs and did not assure repayment to the Treasury. We provided evidence that Bonneville inappropriately applied its 1993 standard for assurance of Treasury repayment. We provided evidence that Bonneville's proposal underestimated the risk that it would not cover the total system costs and therefore the proposal was unlikely to meet its costs and did not assure Treasury repayment. We provided specific evidence that Bonneville's revenue requirements and risk analysis did not adequately address its treaty responsibilities to our tribes, the Clean Water Act, the Endangered Species Act, The Fish and Wildlife Coordination Act, or the Northwest Power Act. We provided information that Bonneville was not implementing the fish and wildlife funding principles. We provided information that Bonneville's analysis ignored information on higher fish and wildlife costs and risks facing Bonneville. We provided evidence that Bonneville's estimates of starting reserves were inconsistent with the Fish and Wildlife Memorandum of Agreement. We also provided information that Bonneville's risk mitigation strategies were inadequate and that Bonneville had underestimated the risk of Treasury deferrals from 2002 through 2006. We also provided evidence that Bonneville's proposal did not address future risks after

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2006. (See attachment WP-07-E-CR-01A incorporated by reference to this testimony. Many of our concerns continue in the WP-07 rate case. We have joined as parties to this proceeding because we continue to be concerned that Bonneville's proposal does not address Bonneville's exposure to risk, does not meet future costs, and does not assure repayment to the Treasury.

Q. PLEASE SUMMARIZE THE KEY ISSUES IN YOUR TESTIMONY.

A. The Tribes continue to be concerned that BPA has not adequately addressed its obligations under federal laws, treaties with Indian tribes, and trust responsibilities. In our testimony we respond to material submitted by BPA in its initial proposal. We provide evidence that BPA's revenues are based on flawed assumptions about the operation of the FCRPS and that BPA has not adequately addressed the risk that revenues could be lower than it has assumed. We provide evidence that BPA has not used the best information available on fish and wildlife costs related to its total system costs. We provide evidence that BPA has not addressed the risk and uncertainty that fish and wildlife costs will be higher than BPA has assumed. We provide detailed analysis of the flaws in the proposed cost adjustment mechanisms and demonstrate that the BPA proposal is not adequate to assure repayment to the Treasury after meeting its costs. We provide recommendations to improve BPA's rate design. Finally, we provide evidence about the economic impacts of implementing our recommendations to show that

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the impacts would have relatively minor impacts on consumers and that Bonneville rates would still be significantly below market rates for electricity.

Q. DO YOU SUPPORT ANY OTHER PARTIES' TESTIMONY?

A. Yes. We support the concerns raised in the testimony of the Save Our Wild Salmon and Northwest Energy Coalition (NE/SO).

Section 2. Management Direction

Q. PLEASE DESCRIBE YOUR CONCERNS ABOUT BPA'S POLICY OBJECTIVES.

A. In WP-07-E-BPA-08, BPA describes the primary financial and policy objectives that guided the development of the WP-07 proposal (see WP-07-E-BPA-08, page 5). Objective 2) is "lowest possible rates, consistent with sound business principles including statutory obligations." This appears to be the only reference to meeting BPA's legal obligation, including its treaty and trust responsibilities. These obligations and responsibilities are important; they deserve more attention. BPA has significant stewardship obligations that are not addressed in the objectives. As a federal agency, BPA has treaty and trust obligations to Indian tribes; they are not addressed in the policies. BPA has not included objectives to meet its obligations under the Northwest Conservation and Electric Power Plan and the Columbia River Basin Fish and Wildlife Program developed pursuant to the Northwest Power Act. BPA has not included objectives to meet its

responsibilities under the Endangered Species Act and other environmental laws. There are also no objectives to ensure that BPA's rates are sufficient to meet its total system costs.

We also have concerns that some of Bonneville's objectives will reduce its ability to meet its statutory, treaty and stewardship obligations. For example, the objective of lower, but adjustable rates rather than higher, but stable rates increases the risk that BPA may not be able to fully repay the Treasury after meeting its costs. Similarly, the objective that reserve levels will not be built up decreases Bonneville's ability to address the risks that it faces.

Q. HOW HAS BPA ADDRESSED THE FISH AND WILDLIFE FUNDING PRINCIPLES FROM THE PREVIOUS RATE CASE?

A. In the WP-02 rate case, Bonneville developed Fish and Wildlife Funding Principles that made commitments to fund BPA's fish and wildlife obligations and position Bonneville to be able to meet future obligations while ensuring repayment of its debt to the Treasury. We could not find any similar principles in the current proposal.

Q. HOW HAS BPA ADDRESSED FEDERAL COURT REQUIREMENTS THAT BIOLOGICAL OPINION ACTIONS MUST BE REASONABLY CERTAIN TO OCCUR?

A. It does not appear that Bonneville has addressed this issue at all. We believe this is a significant omission in the financial and policy objectives. In 2003, the Federal District Court struck down the 2000 Biological Opinion on the FCRPS.

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One of the major concerns was that the Reasonable and Prudent Alternatives called for in the Biological Opinion were not reasonably certain to occur (see attachment WP-07-E-CR-01B). In 2005, the same Court struck down the 2004 Biological Opinion and ordered the federal action agencies to prepare a new biological opinion. One of the issues that action agencies must address will be a demonstration that the actions in a new biological opinion will be reasonably certain to occur (see attachment WP-07-E-CR-01C and WP-07-E-CR-01D).

Q. HOW DID BONNEVILLE ADDRESS EQUITABLE TREATMENT REQUIREMENTS?

A. Bonneville did not analyze this issue in its proposal.

Q. HOW DID BONNEVILLE ADDRESS TREATY AND TRIBAL TRUST REQUIREMENTS?

A. Bonneville did not analyze this issue in its proposal.

Q. HOW DID BONNEVILLE ADDRESS NEPA REQUIREMENTS?

A. Bonneville did not analyze this issue in its proposal.

Q. HOW HAS BONNEVILLE ADDRESSED COMMITMENTS MADE TO COLUMBIA BASIN INDIAN TRIBES?

A. Bonneville has not honored a number of commitments it has made to Columbia Basin Indian tribes. We will provide several examples below to provide a historical context for the current rate case.

Bonneville and other Federal agencies committed to a funding level for fish and wildlife for the Fiscal Years 1996 through 2001 in the Memorandum of

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Agreement on Bonneville Power Administration's Financial Commitment for Columbia River Basin Fish and Wildlife Costs. Section VIII.h. clearly states that: **"**Any funds remaining in these accounts after close of Fiscal Year 2001 will not be re-programmed for any non-fish and wildlife use, but will remain available for expenditure for the benefit of fish and wildlife." (See attachment WP-07-E-CR-01E). At the end of Fiscal Year 2001, Bonneville and other Federal agencies had under-spent these funds guaranteed for fish and wildlife measures under the Fish and Wildlife Memorandum of Agreement by approximately $227 million. Contrary to the agreement, BPA put these funds in its general reserve and they were not available for fish and wildlife. The CRITFC and the Yakama Nation testified repeatedly about this illegal use of MOA funds in the rate case, but Bonneville continued to include the funds in reserves for other uses. Bonneville used its reserve to pay for high-cost electricity to serve the additional loads it committed to, to pay utilities and industries to reduce their use of BPA power, to pay higher costs of operating the dam and nuclear plant, and to pay for higher costs at Bonneville. We repeat our position that this was an illegal use of the funds under the MOA that is contrary to commitments made to Indian tribes (see attachments WP-07-E-CR-01F, WP-07-E-CR-01G, and WP-07-E-CR-01H). The MOA close out table, showing the final status of projects, is available at http://www.bpa.gov/corporate/dff/conbud/pdf/14fishfundingplan.pdf. This

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example raises concerns about whether needed actions are reasonably likely to occur.

Bonneville made repeated assurances to Indian tribes that it would fully fund its fish and wildlife obligations, even if it had to raise its rates or defer its Treasury payments. For example, in a letter dated June 28, 1999, Judi Johansen, the Bonneville Administrator, described the various contingencies available and assured tribal leaders that "we believe this should provide a very high assurance that we can meet our share of the costs of whatever fish and wildlife plan is ultimately chosen." (see Johansen letter, dated June 28, 1999, herein incorporated by reference as attachment WP-07-E-CR-01I). Yet in 2001, Bonneville eliminated fish and wildlife river operations to meet its Treasury payment and capped its fish and wildlife funding through the remainder of the rate period, rather than raising rates to meet its funding obligations as it promised. The Johansen letter also stated that its reserves at the end of the rate period were projected to be $1.4 billion. These ending reserves are extremely important to position Bonneville to be able to fund the higher fish and wildlife protection measures after 2006. In the SN CRAC process, Bonneville lowered its target for the ending reserve; during that process, its projection for FY06 ending reserve was $348 million.

Bonneville has said that implementation of the spill and flow actions in river operations are a critical part of it efforts to provide equitable treatment for

fish and wildlife. Yet in 2001, BPA decided to eliminate these protections to avoid raising rates or deferring payments to the Treasury. The limited mitigation Bonneville offered for the 2001 "emergency" has also been cut.

The failure to protect migrating salmon and steelhead in 2001 was not an isolated incident. The National Marine Fisheries Service developed a "Report Card on Meeting 1995/98/2000 Biological Opinion Seasonal Average Flow Objectives." NMFS compared the flow objectives in its Biological Opinions for both the spring and summer for the Snake River (measured at Lower Granite Dam) and for the lower Columbia River (measured at McNary Dam) with the actual average flows that were provided. The NMFS analysis showed that the hydroelectric system failed to meet the Biological Opinion flow objectives 16 times out the 46 measurements from 1995 through 2003—a 35 percent failure rate (see the attachment WP-E-CR-01J). This example raises concerns about whether needed actions are reasonably likely to occur.

Bonneville and the Administration made commitments in 2000 that the Federal government would aggressively implement the habitat restoration activities and other reforms in the Biological Opinion. In previous rate proceeding we provided evidence that the current funding was not adequate to achieve a third of the actions that the Federal government committed to (see WP-07-E-CR-01A, page 22). This also raises concerns about whether needed actions are reasonably likely to occur.

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The Administration committed that the implementation of the Endangered Species Act would complement the obligation to restore our Treaty fishery. Unfortunately, the Federal efforts focus almost exclusively on ESA species, not fish and wildlife for tribal harvest.

The Administration committed to fully fund both the Biological Opinion and the Fish and Wildlife Program. In reality, funding for resident fish, wildlife, and salmon and steelhead that are not yet listed has been eliminated or deferred in order to give priority to listed species. As evidence of this problem, the only new projects that have been initiated by BPA in the last three fiscal years have been directed at listed species (with the exception of ongoing efforts for wildlife operations and maintenance). This will result in more listing as the species that are being ignored continue to decline. Even the funding for listed species has been inadequate. In fact, more than $100 million of new, scientifically supported projects have been deferred in the latest round of the Council's project selection process due to lack of Bonneville funding. These examples raise concerns about whether needed actions are reasonably likely to occur.

These failures to honor important commitments have resulted in a failure to stop the decline of listed species and to make progress on rebuilding Treaty-protected resources. We provide detailed evidence on these issues later in our testimony.

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After all of these examples of instances where Bonneville has failed to honor its commitments and assurances, Bonneville is now considering a proposal that does not include adequate funding for fish and wildlife. Under Bonneville's proposal, it will take 40 to 80 years to implement needed habitat improvements. The proposal would also reduce the chances of repaying the Treasury on time and in full if there are additional costs associated with implementing the biological opinion or recovery plans. Bonneville's proposal results in rates that are 41 percent below market rates while shifting the risks that Bonneville faces to fish and wildlife and the tribal cultures that depend on them.

The Tribes offer specific recommendations to improve Bonneville's proposal. We offer specific recommendations on how to address Bonneville's total system costs, deal with uncertainties, and assure repayment to the Treasury after meeting Bonneville's costs. These recommendations would result in rates that are still 29 to 38 percent below market rates.

Section 3. Loads and Resources

Q. PLEASE SUMMARIZE YOUR CONCERNS.

A. Bonneville has assumed operation of the FCRPS based on the 2004 Biological Opinion (see WP-07-E-BPA-09 Page 11). Bonneville's assumptions over-estimate the revenues that Bonneville is likely to experience and result in rates

that are not based on its total system costs and are not likely to assure repayment to the Treasury after meeting Bonneville's costs.

Q. PLEASE DESCRIBE THE FISH-RELATED HYDRO OPERATIONS ANTICIPATED BY BPA FOR FY2007 TO FY2009 FOR PURPOSES OF THIS RATE PROCEEDING.

A. Bonneville has assumed operation of the FCRPS based on the 2004 Biological Opinion. The fish related operations anticipated by BPA are described at WP-07-E-BPA-09 Pages 11 to 13. The Federal Circuit Court has ordered that the 2004 Biological Opinion violates the Endangered Species Act and has ordered the federal action agencies to prepare a new biological opinion that addresses the Court's order and meets the requirements of the Endangered Species Act. The Court also ordered additional summer spill in 2005 and additional spring and summer spill in 2006 (see WP-07-E-CR-01C and D and attachment WP-07-E-CR-01K).

Q. DO THE TRIBES SUPPORT THE FISH OPERATIONS DESCRIBED IN BPA'S HYDRO-REGULATION STUDIES?

A. No. CRITFC, Nez Perce, and Yakama are also engaged in regional discussions regarding fish-related changes to hydro-operations. To facilitate those discussions, CRITFC annually prepares its recommended plan for fish operations. Among other things this plan specifies the flow and spill criteria for operation of each of the FCRPS projects. The CRITFC operations plan differs significantly

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from the operations identified by BPA in its testimony. A copy of this plan is available at http://www.critfc.org/legal/riverops05.html.

Q. WHAT ARE THE MAJOR DIFFERENCES BETWEEN THE HYDRO OPERATIONS ANTICIPATED BY CRITFC AND BPA?

A. There are two major differences. The CRITFC plan recommends greater levels of planned spill and increases in flow and duration of flow during spring and summer months when compared to BPA's anticipated operations. The Court has order some of the spring and summer spill protections that were recommended by the Tribes.

Q. HOW DO BPA'S ANTICIPATED OPERATIONS COMPARE TO THE OPERATIONS ORDERED BY THE FEDERAL DISTRICT COURT AS PART OF THE REMAND OF THE 2004 BIOLOGICAL OPINION ON OPERATIONS OF THE FCRPS?

A. Bonneville's assumptions significantly overstate the revenue that is likely to generated by the FCRPS operations. The Federal District Court has ordered additional spill in the late spring and summer to improve the survival of migrating salmon and steelhead that are listed under the Endangered Species Act. Bonneville has estimated that the Court-ordered 2006 operations will reduce its revenues by $60 million per year.

The other significant difference is biological. The Court ordered operations in 2005 resulted in a 64 percent increase in survival for migrating fall chinook (see attachment WP-07-E-CR-01L). The Tribes estimate that the 2006 operation will result in additional increases in survival compared to the operations

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in the 2004 Biological Opinion. This is a significant improvement and an important component of addressing the recovery of salmon and steelhead under the ESA and the biological goals and objectives in the Columbia River Basin Fish and Wildlife Program (see http://www.nwcouncil.org/library/2000/2000-19/Default.htm. pages 16 and 17).

The Court also remanded the Biological Opinion back to the Federal agencies and ordered them to prepare a new Biological Opinion that complies with the Endangered Species Act. We anticipate that the new Biological Opinion will include other measures, in addition to spill and flow, to avoid jeopardizing the continued existence of listed species and to recover salmon and steelhead. Bonneville must be able to implement these additional measures to address the Court's concerns that they are reasonably likely to occur.

Q. HAS BPA ADDRESSED THE POTENTIAL THAT THE 2006 COURT ORDERED OPERATIONS FOR THE FCRPS MAY CONTINUE THROUGH THE RATE PERIOD?

A. No. Bonneville has assumed that the 2004 Biological Opinion operations will continue through FY 2009 (see WP-07-E-BPA-09 Pages 11 to 13). Bonneville did not analyze the potential impact of the FY 2005 and FY 2006 Court-ordered FCRPS operations continuing. In a data response Bonneville states: " BPA does not have any information nor has it conducted any analysis regarding the impacts on BPA Initial Proposal if the FY 2005 injunctive relief for river operation is continued for FY 2006". See CR-BPA-008, incorporated by reference as WP-07-

E-CR-01M. Based on the Tribes' analysis, the FY 2006 operations will likely have a measurable impact on Bonneville revenues; our analysis results in estimated costs that average approximately $33 million per year more than the 2004 Biological Opinion based on Bonneville's estimates of future market prices (see attachment WP-07-E-CR-01N). This example raises concerns about whether needed actions are reasonably likely to occur.

Q. WHAT ASSUMPTIONS SHOULD BPA USE FOR THE OPERATIONS OF THE FCRPS DURING THE RATE PERIOD?

A. Bonneville should assume the Court-ordered 2006 operations in its base assumptions for the rate period. As discussed in more detail below, Bonneville should modify its NFB cost adjustment mechanism to be able to immediately incorporate whatever operations are ordered by the Court.

Q. HAS BPA ADEQUATELY ADDRESSED LOAD UNCERTAINTY?

A. No. Bonneville has assumed that it will implement the subscription proposal being discussed in the Long-Term Contracts Regional Dialogue (see http://www.bpa.gov/power/pl/regionaldialogue/09-12-2005_concept_paper.pdf). Under this proposal, Bonneville would allocate its current electricity supplies at the cost of the Federal Base System; any additional Bonneville loads would be served from a second tier of resources that would be priced to reflect the costs of those resources. (See Concept Paper, pages 1 and 2).

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Successful implementation of the Bonneville proposal is not assured and a number of controversial issues remain to be worked out. For example, the parties have not agreed on how to resolve the benefits to investor-owned utilities, the scope and process for customer involvement in Bonneville cost control, dispute resolution, and other important issues. (See the agenda from the December 16, 2005 Principals Management Group www.bpa.gov/power/pl/regionaldialogue/12-16-2005_pmg_meeting_draft_agenda.pdf). In addition, the discussions have not addressed how to improve the certainty that fish and wildlife measures under the ESA and Northwest Power Act will be implemented. Given the magnitude of the remaining issues, Bonneville's assumption that it will not be required to serve additional load at a melded rate may be optimistic.

This is a very important uncertainty. In the WP-02 rate process the Tribes raised concerns that there was a risk that Bonneville had underestimated it loads and costs. We raised this concern because Bonneville's rates were then approximately 40 percent below market rates and it seemed likely that regional utilities would place as much load on Bonneville as possible. We also expressed concerns that the costs of serving this additional load could be much higher than Bonneville had assumed. Bonneville ignored our concerns and committed to serve 3,400 megawatts of power sales in excess of the resources that Bonneville had under contract. Bonneville estimated that serving the additional load cost $3.9 billion from 2002 through 2006. Bonneville's decision to take on significant

additional costs and risks without raising its base rates was the primary reason for its financial problems during the FY 2002 to FY 2006 rate period. (See What Led to the Current BPA Financial Crisis, A BPA Report to the Region, herein incorporated by reference as attachment WP-07-E-CR-01O).

This is a concern because we estimate that Bonneville rates are currently 59 percent below market rates. We estimate that Bonneville rates will be, on average, 41 percent below market rates during the next rate case—the change is primarily a reflection of lower estimates of market rates by Bonneville. We provide more detail later in our testimony. Given the lack of certainty that Bonneville will be successful in its subscription strategy and the potential that utilities will place significant additional load on Bonneville because its wholesale power rates are so much cheaper than other alternatives, the current Bonneville assumptions understate the risk that Bonneville faces. This risk is also likely to affect the next rate period, after FY 2009. Therefore, Bonneville should position itself to be financially healthy and build a sufficient reserve at the end of the rate period to assure future repayment to the Treasury.

Q. HAS BONNEVILLE APPROPRIATELY ADDRESSED THE DSI LOAD?

A. No. We do not support Bonneville's assumption that it will provide a power allocation to the Direct Service Industries along with $59 million per year in financial benefits. Bonneville does not have any legal obligation to serve this load. Bonneville's proposal to provide these benefits at the same time that it is

not implementing the Council's fish and wildlife program as required by federal law is inappropriate.

Section 4. Revenue Requirements

Q. PLEASE SUMMARIZE YOUR CONCERNS?

A. One of the purposes of the rate case process is to ensure that Bonneville's final rate decision is based on the best available information. Bonneville's assumptions regarding its Integrated Fish and Wildlife Program (also know as its direct program) budget that are described in its testimony are not adequate to meet its legal obligations under the Northwest Power Act and Endangered Species Act. Failure to adequately address these costs increases the risk that Bonneville's rates will not be based on its total system costs and that Bonneville will not be able to ensure repayment to the Treasury after meeting its costs. It also reduces the probability that needed protection and recovery actions are reasonably likely to occur.

Q. ARE BONNEVILL'S CURRENT FISH AND WILDLIFE FUNDING LEVELS SUFFICIENT TO MEET ITS COSTS?

A. No. In the WP-02 rate case we provided evidence that Bonneville had not used the best information available regarding its fish and wildlife costs. We also provided testimony that there is no evidence in the Bonneville proposal to indicate that the $139 million per year was sufficient to meet Bonneville's obligations

under the Endangered Species Act, Northwest Power Act, Clean Water Act, or its trust responsibilities to Columbia Basin Indian tribes. Bonneville had asserted that its budget is based on the Federal Caucus Implementation Plan and the Council's recommendations for implementation of the Columbia River Basin Fish and Wildlife Program. The panel carefully examined the documents provided by Bonneville and found no analysis or documentation that supports the assertion in the proposal (See attachment WP-07-E-CR-01A).

The panel also examined material developed by the Pacific Northwest Electric Power and Conservation Planning Council (Council) regarding the implementation of the Fish and Wildlife Program. We note that on February 21, 2003 the Council wrote a letter to Bonneville regarding its recommendations for fish and wildlife funding reductions for FY03 (herein incorporated by reference as attachment WP-07-E-CR-01P). The letter indicated that the Council had not prepared recommendations for FY04-FY06. In fact the letter states:

> The Council cannot proceed to evaluate fish and wildlife expense program spending levels without resolving the issues identified above. At this point, the Council stands by its earlier statement to you that it is concerned that a reduction in Bonneville's spending commitment below $139 million may jeopardize its ability to meet legal requirements under the Biological Opinions and the Northwest Power Act. Critical Biological Opinion check-ins are imminent. These are the funds that are necessary to implement many of the important projects and programs that must be in place to succeed in those evaluations. The reductions precipitated by Bonneville's immediate switch to its "accrual rules" are going to have an impact on our fish and wildlife restoration efforts. We are concerned that

deeper and sustained cuts in the out- years may have serious impacts that could retard the progress we have been making.

The Council letter also notes that cuts in Bonneville's fish and wildlife funding may risk it ability to meet it legal obligations:

> Bonneville's many programs are not all equal. Some, such as the fish and wildlife program, respond to legal obligations that cannot be abandoned, even temporarily. Programs with such legal requirements must be viewed differently than programs that are useful and valuable but not legally required or unquestionably essential to Bonneville's core statutory missions. Moreover, to be equitable, you must assess where various program costs are today against their planned levels. Programs operating within planned budgets are penalized for their efficiency if this is not considered. Finally, because you are considering cost reductions in the context of the SN CRAC, the significance of a possible program reduction from a rate impact perspective must be understood. It makes little sense to increase legal risks to the durability of the power system because of a cost reduction that has essentially no impact on rates.

We were concerned that there was no analysis that supported Bonneville's assertion in the WP-02 and SN-03 proposals and that Bonneville was not using its fund consistent with the Program.

Q. ARE BONNEVILL'S ASSUMPTIONS ABOUT FUTURE FISH AND WILDLIFE FUNDING ADEQUATE TO ADDRESS ITS TOTAL SYSTEM COST?

A. No. Bonneville has significantly underestimated the costs to implement the Columbia River Basin Fish and Wildlife Program, pursuant to the Northwest Power Act, and the FCRPS Biological Opinion and pending recovery plans,

pursuant to the Endangered Species Act. This raises significant concerns about whether needed protection and recovery actions are reasonably likely to occur.

Q. WHAT IS THE ORIGIN OF BPA'S ESTIMATE OF ITS INTEGRATED FISH AND WILDLIFE PROGRAM COSTS?

A. BPA worked with the Northwest Power and Conservation Council (the Council) and other interested parties to assess current funding levels for each of its major categories under the Integrated Fish and Wildlife Program (also referred to as the Direct Program). This process also identified "drivers" that could increase or decrease costs in the FY 2007 through FY 2009 period (see WP-07-E-BPA-02, pages 11, line 13 through page 13, line 11 and WP-07-E-BPA-02, pages A33 through A41). Throughout this process, there was significant uncertainty about the future costs for implementing the subbasin plans. These plans will primarily affect the habitat and hatchery production categories of the Integrated Program. As discussed below, the Columbia Basin Fish and Wildlife Authority formed a workgroup to develop cost estimates for implementing the subbasin plans (See attachment WP-07-E-CR-01Q).

Q. WHAT ARE YOUR CONCERNS ABOUT BPA COST ASSUMPTIONS?

A. Bonneville has not adequately addressed the cost, risks, and uncertainties that it faces. Therefore, Bonneville's proposal does not address its total system costs and increases the risk that it will not be able to repay the Treasury after meeting its costs. In addition, Bonneville is not using its fund in a manner that is

consistent with the Columbia River Basin Fish and Wildlife Program. We provide specific responses to the Bonneville testimony in this section. More detail is available in attachment WP-07-E-CR-01Q, attachment WP-07-E-CR-01R, and WP-07-E-CR-01S). Those comments, in their entirety, are incorporated into this testimony by reference.

A key concern is Bonneville's assumptions about inflation. Bonneville detailed its inflation assumptions during a review of alternatives in the Program Function Review (see attachment WP-07-E-CR-01T). BPA assumed a 1.5 percent inflation rate for habitat work between 2005 and 2008, increasing from $35.8 million to $37 million, with the rationale that this function involved lesser salary and energy influences. It appears that it did not assume inflation for the other categories. In Bonneville's presentation to the Council on its final Integrated Program funding proposal, it indicated that it assumed a 6.5 percent inflation rate for habitat, increasing from $35.8 million to $38.3; the inflation rate was applied to the average FY2001 to FY 2004 funding level. It used the same inflation assumption for hatcheries, increasing from $36.1 million to $38.4 million. Bonneville decreased the other categories; however, they indicate that they assumed the inflation rate in mainstem and coordination (see attachment WP-07-E-CR-01U). It is important to note that a 6.5 percent inflation rate from 2003 (the mid-point of the period Bonneville used as the base) and 2008 (the midpoint in the next rate period) is equal to a 1.25 percent annual inflation rate for

the same period; Bonneville did not provide any rationale for this unrealistically low assumption. Applying a 3 percent annual inflation rate would increase the habitat costs to $41.5 million and hatcheries to $41.6 million. The Tribes commented that habitat costs were increasing much faster than inflation because of second home development in riparian areas and recommended a 6 percent inflation assumption—this would have increased the base habitat funding to $47.9 million. The total funding for the Integrated Program represents a reduction of $18.9 million when adjusted for a 3 percent annual inflation rate—14 percent (see WP-07-E-CR-01V).

BPA has assumed a reduction of $8 million for total Research, Management, and Evaluation from the average funding in FY 2001-FY2004. When adjusted for a 3 percent annual inflation rate, the reduction in the current service level is $14.5 million—a real reduction of 35 percent. BPA has not provided any details on the RM&E activities that would be reduced or eliminated. Given the requirements for these activities in the FCRPS Biological Opinions, the recommendations of the Independent Science Review Panel, and the recommendations of the CBFWA workgroup, we believe that the amount of monitoring and evaluation will increase significantly. The reductions that BPA has assumed are unrealistic and increase the risk that its rates are not based on its total system costs. Bonneville's assumptions increase the risk that Biological Opinion measures are not reasonably likely to occur.

BPA has proposed a reduction of $2.9 million for Information Management, Coordination, and Administration (ICMA). Adjusted for inflation, this is a real reduction of $4.5 million—45 percent. Currently funding for the information management, coordination and administration portion of the budget totals approximately $9.78 million and is used for: StreamNet ($2.4 million/year), the PIT tag info system ($2.1 million/year), CBFWA ($1.7 million/year), the Fish Passage Center ($1.3 million/year), the ISRP/ISAB ($1.1 million/year), CRITFC watershed support ($0.27 million/year), Second-Tier Database ($0.24 million/year), Columbia Basin Bulletin ($0.17 million/year), and one-half million in miscellaneous small projects. During the FY 2007-2009 project solicitation process, these projects have requested in excess of $11 million per year. We find it unlikely that the region collectively, or BPA unilaterally, will decide to eliminate and/or substantially cut these efforts in sufficient time to realize the projected reductions by FY 2009. Again, BPA is proposing a reduction which is unlikely to be made, thereby furthering the failure to base its rates on actual costs. We also note that BPA's proposal acknowledges the many additional steps that must be negotiated before funding decisions will be made. This will delay decisions to reduce current RM&E and IMCA costs at least until FY 2008, mid-way through the rate period.

BPA's proposal would reduce Mainstem activities by $700,000; however, adjusted for inflation the real reduction would be approximately $1.6 million per

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year—27 percent. BPA's assumptions run counter to the increased requirements for mainstem activities in the Biological Opinion and the Council mainstem amendments. This raises concerns that the Biological Opinion measures are not certain to occur and that Bonneville is not consistent with the Program. Bonneville has not provided any basis for its funding level; there is no relationship to the cost estimates developed by the CBFWA workgroup (see discussion below). Bonneville is proposing a reduction which is unlikely to be made, thereby furthering the failure to base its rates on total system costs.

Bonneville assumes a $2.3 million increase for production; without inflation, this funding level would mean that the production activities identified in the subbasin plans would take approximately 22 years to complete. However, adjusted for inflation BPA's proposal is actually a $3.4 million reduction in current services levels—9 percent. This raises a concern about maintaining current activities and would leave no additional funds for new production strategies called for in the subbasin plans. BPA has not provided any basis for its funding level; there is no relationship to the cost estimates developed by the CBFWA workgroup. BPA is proposing a reduction which is unlikely to be made, thereby furthering the failure to base its rates on actual costs.

BPA's proposal shows an increase of approximately $12.5 million for current habitat and new Biological Opinion and subbasin plan implementation. Assuming a 3 percent annual inflation rate this is a real increase of approximately

$6.8 million (see attachment WP-07-E-CR-01W). Using a more realistic inflation rate for the cost of land and water acquisitions and easements of 6 percent the real purchasing power is increased by only $0.4 million per year (see attachment WP-07-E-CR-01X). BPA has not provided any basis for its habitat funding level; there is no relationship to the cost estimates developed by the CBFWA workgroup or analysis that its proposal is consistent with the Program. It is important to note that the ongoing costs (operations and maintenance, etc.) for habitat activities are approximately $12 million per year. With a 3 percent inflation assumption it would take about 45 years to implement the strategies in the subbasin plans based on the costs identified by the CBFWA workgroup; this assumes that there would still be habitat available for purchase in forty years. Using more realistic inflation and cost allocation assumptions, BPA's proposed pace of implementation would take more than 80 years to complete these strategies (see WP-07-E-CR-01R, pages 26-28). Bonneville's assumptions are not based on its total system costs and not consistent with the Columbia River Basin Fish and Wildlife Program.

BPA appears to rely on the assumption that there are a number of projects that are unnecessary in the Integrated Program and it can reprogram funding from such projects. The Council, CBFWA, and ISRP went through an exhaustive effort as part of the Provincial Review in 2003 to evaluate all of the ongoing and proposed activities for the Integrated Program. The Provincial Review identified funding needs of approximately $300 million per year for the Integrated Fish and

Wildlife Program, yet BPA has capped funding at $139 million. The priority setting process has carefully reviewed the priorities and effectiveness of the current activities; assumptions that there are a number of unnecessary projects that can be cut are unrealistic. The ongoing projects have been flat funded, no allowable cost of living increases, for several years. Many of the these projects are heavy on personnel due to the nature of fish and wildlife mitigation projects will need increases to maintain high caliber professionals. This combined with an aggressive effort to implement subbasin plans will only drive the necessary funding levels upwards as evidenced by the ongoing projects requesting significantly more funding for FY 2007-2009.

The experience with the current proposals for funding demonstrates the inadequacy of the proposed funding levels. BPA is proposing an annual budget of $143 million for the expense portion of the Program and $36 million for capital for a total of $179 million. In the FY 2007-2009 project selection process, 261 ongoing projects have requested approximately $232 million annually and 281 new proposals have requested approximately $100 million per year for a total of $332 million per year. These proposals were in response to the BPA and Council call for projects to support subbasin planning. For ongoing projects, the proposed funding would have to be reduced by over 33% without funding any new actions. Again, this raises concerns that Biological Opinion measures are not reasonably

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likely to occur and that Bonneville's proposal is not consistent with the Columbia River Basin Fish and Wildlife Program.

Bonneville has not addressed the costs of hatchery reform. Our analysis shows that the expenses for these measures total $123 million and capital totals $340 million. Bonneville has budgeted approximately $250,000 per year for this activity (see WP-07-E-CR-01R, page 28-29)

The Bonneville proposal does not adequately address its costs of implementing the FCRPS Biological Opinions and the Columbia River Basin Fish and Wildlife Program. Without adequate implementation funding there will not be reasonable and prudent measures to avoid jeopardizing the continued existence of the listed species. This raises significant concerns about whether needed protection and recovery actions are reasonably likely to occur and Bonneville's consistency with the Program.

Bonneville will also be responsible for a major portion of the Clean Water Act costs associated with the FCRPS dams. Failure to comply with the Endangered Species Act and the Clean Water Act raise significant risks for Bonneville.

The Tribes offered extensive analysis on these issues that demonstrated that Bonneville's fish and wildlife funding levels were not adequate to implement the Council's Program and the Biological Opinion; they were not adequate to address hatchery reform; not adequate to address other fish and wildlife costs; and

would delay implementation of actions needed to meet Bonneville's obligations under the Endangered Species Act, the Northwest Power Act, and the Treaties with the Tribes (See attachment WP-07-E-CR-01R, pages 26-30).

Q. HAS BONNEVILLE ADEQUATELY ADDRESSED THE UNCERTAINTY ASSOCIATED WITH FUTURE FISH AND WILDLIFE FUNDING?

A. No. We requested that Bonneville provide any data, analysis, documentation, and related materials that address BPA's fish and wildlife cost uncertainty assumptions including any analysis of the uncertainties BPA considered related to litigation regarding the adequacy of the FCRPS Biological Opinion, or other pending litigation; changes that could be associated with Treaty Trust responsibilities; changes that could result from the reviews of the FCRPS biological opinions, the Clean Water Act, the Fish and Wildlife Coordination Act; and potential changes associated with ESA recovery planning and the NWPPC subbasin plans. Bonneville responded that:

> The major risk categories included in NORM for Fish and Wildlife were limited to potential variations in the annual spending in the Direct Program hatcheries, capitalized habitat purchases, and implementation f the sub basin plans. NORM did not account for any of the major uncertainties described in the request. Its focus was on the potential cost variability of current actions, assuming no major shift in emphasis or additional requirements being placed on the FCRPS.
>
> BPA performed no risk analysis regarding the uncertainties related to litigation regarding the adequacy of the FCRPS Biological Opinion or any other pending or threatened litigation.

See data response CR-BPA-050 herein incorporated by reference as WP-07-E-CR-01Y.

Bonneville faces a number of uncertainties regarding future fish and wildlife funding. For example, the Council is working with fish and wildlife managers, and stakeholders to amend the Columbia River Basin Fish and Wildlife Program. In addition, NOAA Fisheries is preparing recovery plans pursuant to the Endangered Species Act; final plans were scheduled to be completed by the end of 2006. NOAA Fisheries has indicated its interest in coordinating with subbasin planning and using the subbasin plans for the recovery plans if they meet certain standards. In our expert judgment, these recovery plans will likely identify additional activities, beyond current efforts, to meet the requirements of the Endangered Species Act. Bonneville's proposal does not address the potential that the revision Biological Opinions will increase its base costs. We address the inadequacy of the NFB adjustment later in this testimony. Again, this raises concerns that Biological Opinion measures are not reasonably likely to occur and that Bonneville's proposal is not consistent with the Columbia River Basin Fish and Wildlife Program.

Bonneville's proposal also does not address the uncertainties associated with meeting the Clean Water Act. The Environmental Protection Agency and state environmental agencies are developing plans to meet water temperature standards for the Columbia and Snake Rivers. These plans are likely to require actions by the Corps of Engineers and the Bureau of Reclamation. Bonneville would pay a

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portion of these costs. By failing to include this uncertainty, Bonneville's proposal does not address its likely costs.

Q. HAS BONNEVILLE ADEQUATELY ADDRESSED NON-LISTED SPECIES IN ITS PROPOSAL?

A. No. According to BPA's PISCES contract reporting software, there are 24 projects that have been initiated since FY 2003. Of these, 18 projects were directed at listed species, 4 projects are continuing efforts for wildlife operations and maintenance, one is for coordination of Monitoring and Evaluation (mostly Biological Opinion related), and one is for an energy efficiency effort within BPA funded hatcheries. Although this may be a course indicator, it is clear that mitigation funding for non-listed species is declining as a proportion of the Program and that Bonneville is not acting consistently with the Program.

Q. HAS BPA ANALYZED WHETHER ITS INTEGRATED PROGRAM BUDGET IS ADEQUATE TO IMPLEMENT THE FCRPS BIOLOGICAL OPINION?

A. No. This is especially problematic because the Federal District Court has order the Federal action agencies to revise the Biological Opinion to be consistent with the requirements of the Endangered Species Act. In our judgment, this is likely to increase the level of effort required. This raises significant concerns about whether needed protection and recovery actions are reasonably likely to occur.

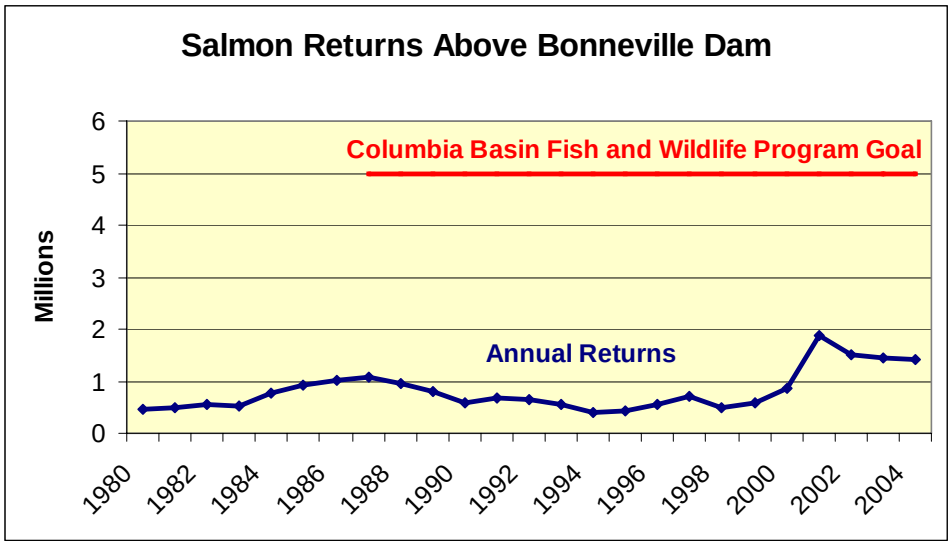
Q. HAS BPA ANALYZED WHETHER ITS INTEGRATED PROGRAM BUDGET IS ADEQUATE TO IMPLEMENT THE COUNCIL'S COLUMBIA RIVER BASIN FISH AND WILDLIFE PROGRAM?

A. No. We requested the analysis that Bonneville had performed on this question. Bonneville objected to our data request on this subject; however, without waiving its objections, Bonneville referred us to several documents (See data response CR-BPA-024, herein incorporated by reference as attachment WP-07-E-CR-01Z). The panel has reviewed these documents and concluded that Bonneville did not conduct an analysis that shows that its proposed Integrated Program funding is adequate to implement the Council's Program. We will respond to the Bonneville documents in more detail below.

We also submitted a data request regarding Bonneville's evaluation of whether it was likely to achieve the goals and objectives of the Council's Program. Bonneville also objected to this request and referred us to the same documents (see CR-BPA-028, herein incorporated as attachment WP-07-E-CR-01AA).

The 2000 Columbia Basin Fish and Wildlife Program includes specific goals and objectives for anadromous fish: First, stop the decline of salmon and steelhead populations above Bonneville Dam by 2005. Second, restore the widest possible set of healthy naturally reproducing populations of salmon and steelhead in each relevant province by 2012. And third, increase returning salmon and steelhead to an average of five million adults returning above Bonneville Dam by 2025 in a manner that supports tribal and non-tribal harvest (See of the 2000 Columbia River Basin Fish and Wildlife Program, page 16 and 17). Our analysis

indicates that Bonneville is not consistent with the Program. For example, Bonneville has not achieved the first objective, the population levels for a number of salmon and steelhead stocks continue to decline. Our analysis shows that at Bonneville's current level of effort, it will take 40 to 80 years to implement the habitat work identified in the Council's subbasin plans (see WP-07-E-CR-01R, pages 26-28). Clearly, this pace will not meet the second Program objective and make it very unlikely to achieve the third objective. This figure shows the lack of progress toward meeting the Council's overall goal:



Q. ARE BETTER FISH AND WILDLIFE COST ESTIMATES AVAILABLE?

A. Yes. As Bonneville was developing its budget for the Integrated Program for this rate case, the Columbia Basin Fish and Wildlife Authority formed a workgroup comprised of federal, state, and tribal fish and wildlife managers to prepare

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detailed estimates of the costs of implementing the subbasin plans and other Program measures.

The subbasin plans were the produce of a multi-year, $13 million effort involving fish and wildlife managers, local stakeholders, and other interested parties. This effort developed plans for all of the subbasins in The Columbia River Basin. These plans assessed the current conditions in each watershed, the desired population levels, and the key limiting factors. The plans also included specific strategies and management plans to achieve the biological objectives for each subbasin. Each plan addressed the requirements of the Council's program (See the Columbia River Basin Fish and Wildlife Program, pages 39 to 43). The Council formed technical and policy level groups to oversee the development of the subbasin plans and the plans were reviewed by the Independent Science Advisory Board.

The CBFWA workgroup coordinated the efforts of the Columbia Basin fish and wildlife managers in the development of detailed budgets to implement the subbasin plans. The CBFWA workgroup effort was based on the detailed analysis of the fish and wildlife managers of the production and habitat costs associated with implementing the Council Fish and Wildlife Program and the FCRPS Biological Opinion. The workgroup compiled the cost estimates for 30 subbasins into province level costs; where costs were not available for a subbasin, the workgroup extrapolated costs from similar subbasins based on land area. The

workgroup incorporated the production and habitat costs into the other costs estimates that had been developed by the Council and Bonneville to develop an overall budget for the Integrated Fish and Wildlife Program. The CBFWA workgroup circulated its draft report in beginning in January of 2005 to the fish and wildlife managers, the Council, Bonneville, utilities, and others. The workgroup incorporated all of the comments it received and the review process improved the quality of the analysis. The workgroup specifically requested comments on whether there were any better assumptions or costs for the report. We did not receive any analysis from Bonneville or its utility customers that provided alternative costs for implementing the subbasin plans and other elements in the Program and Biological Opinion. We incorporated the best information available into the Tribes' recommendations.

Based on our participation in this process, we believe that the CBFWA workgroup report is the most detailed estimate of the costs of implementing the Council Fish and Wildlife Program and the FCRPS Biological Opinions available. In fact, it is the most detailed estimate ever produced on this issue. The Yakama Nation provided this report to BPA staff several times, including in our April 29, 2005 comments on the PFR and attached the CBFWA workgroup report and incorporate it in these testimony by reference (see attachments WP-07-E-CR-01Q and R).

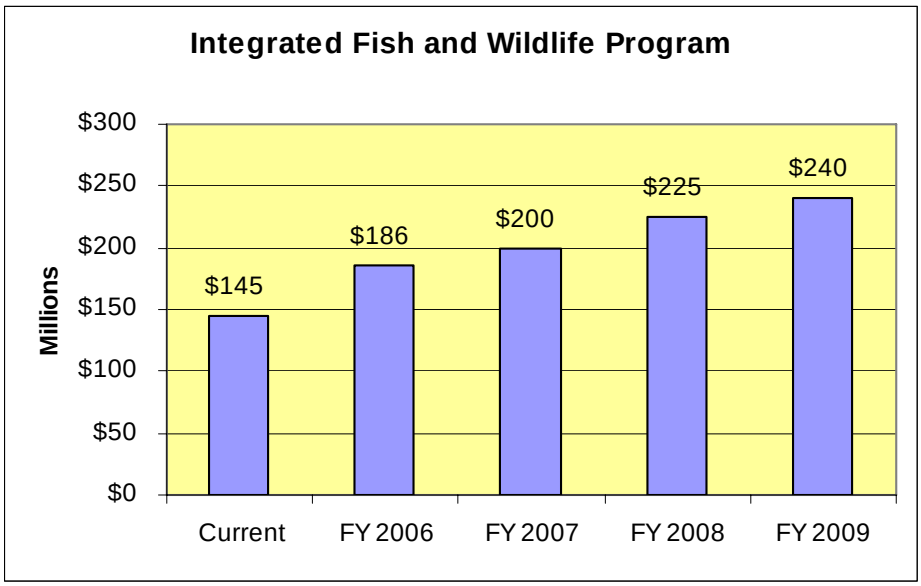
The CBFWA workgroup found that implementing the habitat and production activities and other measures in the Council's Program had a total cost of $1.5 billion and the cost of wildlife mitigation was $300 million over the next ten years. Based on this work, CBFWA wrote to BPA and the NPCC on March 16, 2005 to support adequate funding for fish and wildlife in the next rate case. The letter states:

> While CBFWA Members are continuing to review the detailed costs, the analysis completed to date provides a strong basis for increasing the funding for BPA's Integrated Program in the next rate case period to at least $240 million per year. This figure assumes that BPA would use its borrowing authority for new production facilities and the acquisition of land and water to protect habitat. It also does not include a comprehensive assessment of costs for mainstem measures beyond those contemplated in the Updated Proposed Action or the NPCC Program. Additional mainstem measures are necessary to protect, recover, and restore anadromous fish impacted by the federal hydrosystem. Consistent with recommendations the Members have made in the past, the analysis supports the need for BPA to begin to ramp up efforts by returning to the funding levels originally assumed in the 2002 rate case. BPA set its rates and has been collecting revenues on the assumption that funding for the Integrated Program would be $186 million per year. It is important to increase funding in FY 2006 to at least this level.
>
> Based on our work to date, it is clear that the current spending levels are inadequate to protect, mitigate, and enhance fish and wildlife under the Northwest Power Act. Our analysis shows that at the current spending levels, it would take over 100 years to implement all the measures contemplated in the NPCC Program.

See the CBFWA letter at attachment WP-07-E-CR-01BB.

A key issue was the pace of implementation for the habitat and production activities. The Tribes believe that the workgroup developed realistic recommendations for implementation. The Tribes support an increase in funding

for implementation over the next four years. This would provide time to build the necessary staffing, programs, and other infrastructure for implementing the strategies in the NPCC Program. The workgroup recommended that FY 2006 funding should be $186 million—this is the level originally assumed in the 2002 Rate Case; we also understand that it is the approximate planning target being used by the BPA fish and wildlife division. We further recommended that funding should ramp up to $200 million in FY 2007, $225 million in FY 2008, and $240 million in FY 2009. The figure below shows this ramp up.



This funding level would put the region on a path to implement the subbasin plans in about ten years. This pace of implementation would have much lower biological risk to listed species and offers some hope of progress on restoring the treaty fisheries of the Columbia Basin Indian tribes.

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These recommendations would minimize biological risk to species in the Columbia River Basin; BPA should implement actions to provide the habitat conditions that these species need to survive as soon as possible. Many of the ESUs listed under the ESA have growth rates (lambdas) that are less than 1.0—that means these populations are not replacing themselves and will continue to decline toward extinction.

The costs of acquiring or leasing land and water to protect and enhance habitat will continue to increase as human population grows. We project that these costs will increase significantly faster than inflation, especially the acquisition of land in riparian areas to protect habitat.

Therefore, we conclude that a ten-year implementation schedule for the subbasin plans has the lowest biological risk and the lowest long-term costs. We also note that implementation of the subbasin plans represents a small portion of the habitat protection and enhancements needs in the Basin. The CBFWA workgroup did a course grain analysis of the total habitat work needed to protect and enhance all of the habitat in the Basin and found that this effort would be significantly larger than the work identified in the subbasin plans. Completing the subbasin plans as quickly as possible will provide a good start to the long-term habitat work that is likely to be needed to meet our goals. The analysis of these issues is described in more detail in attachments WP-07-E-CR-01Q, R, and S.

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On May 19, 2005, the Affiliated Tribes of Northwest Indians (representing all 53 Indian tribes in the Northwest) adopted a resolution supporting these funding levels for the rate case. A copy of the resolution is attached (See attachment WP-07-E-CR-01CC).

Unfortunately, Bonneville ignored these estimates in setting its budget for the Integrated Program. As discussed above, Bonneville's estimate is not based on the costs of implementing the subbasin plans or meeting the goals and objectives of the Columbia River Basin Fish and Wildlife Program. The Bonneville budget uses unrealistic assumptions about inflation, and the funding needed to implement the Program and Biological Opinion.

Q. HOW DO THE TRIBE'S RECOMMENDATIONS COMPARE TO PREVIOUS ANALYSIS?

A. CBFWA has developed two previous fish and wildlife cost estimates. The first was in 1998 as part of the Multi-Year Implementation Plan. This effort developed costs for implementing all of the elements of the Council Program and FCRPS Biological Opinion. The annual costs at the time were $200 to $225 million—this would be approximately $275 million today, adjusted for inflation to 2005 dollars.

In 2003, CBFWA and the Council conducted the Provincial Review to determine the costs of implementing projects that had been approved by the fish and wildlife managers, the Council, and the Independent Science Review Panel. The Provincial Review identified BPA revenue requirements (capital,

reimbursable costs, and direct program) of $310 million per year for FY 2003 through FY 2006 (approximately $329 million adjusted for inflation to 2005 dollars).

CRITFC, the Oregon NPCC office, and the Yakama Nation also developed estimates of the costs of implementing the 2000 FCRPS Biological Opinion and NPCC Program in January of 2001. This estimate was based on more aggressive habitat restoration activities to implement the "Aggressive Non-Breach Alternative" in the Biological Opinion and had an annual cost of $356 million (approximately $400 million adjusted for inflation to 2005 dollars). This figure assumed that all of the costs would be expensed; if CRITFC had assumed that some of the costs would be capitalized, the estimate would be similar to the recent CBFWA costs. The following figure has been adjusted for inflation and shows that BPA has never provided funding at the levels recommended by the fish and wildlife managers.

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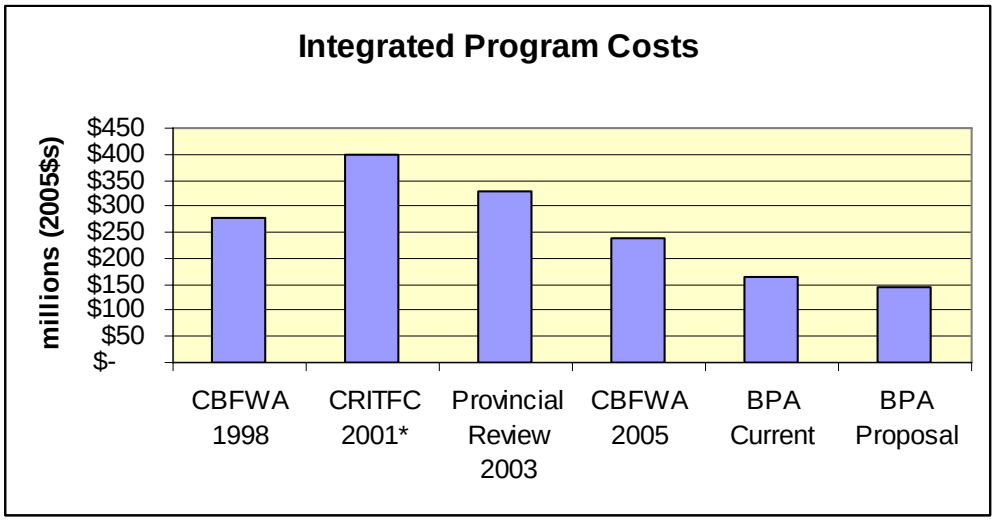

Q. ARE THERE UNCERTAINTIES ASSOCIATED WITH THE TRIBES RECOMMENDATIONS?

A. Yes. All estimates of future costs will have associated uncertainty. The CBFWA workgroup identified a number of uncertainties that could increase Bonneville's total system costs.

The CBFWA workgroup cost analysis assumed that other branches of the Federal government would provide contributions. For example, the costs for implementing plans in several subbasins (notably those in the Intermountain Province) assume funding from the federal land management agencies that may or may not be forthcoming. If additional Federal appropriations are not available, the region will need to address how to accomplish this work.

The remand of the current Biological Opinions will result in significant changes in required fish and wildlife activities, and will likely increase costs or affect revenues. Bonneville estimates that the 2005 operations reduced its

revenues by an estimated $75 million above the operations contemplated in the 2004 Biological Opinion and the impact of the FY 2006 operation is expected to by approximately $60 million. We expect that the operations that are most likely to occur in 2007-2009 are those operations that actually occurred in 2005 and 2006—we believe it is unrealistic to assume that the Circuit Court will order less protection for listed species during the rate case period. We also expect that other river operation, habitat, and monitoring and evaluation activities will be identified in the remand process.

NOAA Fisheries is developing recovery plans for salmon and steelhead listed under the Endangered Species Act; the plans are scheduled to be completed in late 2006. Some of these species were listed fifteen years ago and therefore it is critical that these recovery plans be completed as soon as possible. It is our professional judgment that the recovery plans are likely to include more actions than are currently identified in the subbasin plans and therefore the costs of implementation are likely to be higher. We base our judgment on the fact that the subbasin plans were developed by fish and wildlife managers and stakeholders in each of the watersheds through a consensus process. In some cases, local landowners objected to some of the habitat and water quality actions identified by the fishery managers; as a result, measures that will be needed to recover listed species were not included in the final subbasin plans.

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The prospect of shifting the cost of the Mitchell Act hatcheries to BPA is a substantial uncertainty, considering Congress's previous interest in this issue and increasing pressures on the federal budget.

Given this analysis, the Tribes are concerned that the BPA proposal for the Integrated Fish and Wildlife Program is not adequate to implement the Council Program and the Biological Opinions. Failure to make adequate progress could increase the risk of extinction for listed species and makes it unlikely that the region will achieve the fish and wildlife rebuilding goals in the Council's Program.

All of these uncertainties point to the likelihood of increasing costs for Bonneville to meet its fish and wildlife responsibilities during the FY 2007 through FY 2009 rate period. The Initial Proposal does not adequately address these uncertainties.

Q. ARE THERE OTHER UNCERTAINTIES THAT WOULD AFFECT BPA'S TOTAL SYSTEM COSTS?

A. Yes. Bonneville has taken the position that much of the acquisition of land and water must be expensed The Tribes assumed that Bonneville would use its borrowing authority to capitalize these costs and recommended a ramp up to $240 million per year. Bonneville estimates that expensing these costs would total $310 million per year (see http://www.efw.bpa.gov/Integrated_Fish_and_Wildlife_Program/YINCRITFCLet

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terandAttachments.pdf attachment page 1). BPA's policy position on the use of borrowing for land and water acquisition could add $70 million per year to the costs of implementing the subbasin plans that the Tribes have recommended.

Q. IS BPA RESPONSIBLE FOR THE FISH AND WILDLIFE FUNDING YOU HAVE IDENTIFIED?

A. Yes. The Tribes view this issue in the context of the Northwest Power Act. Under Section 4(h)(10) of the Act, Bonneville must use its fund consistent with the Council Program. Section 4(h)(11) of the Act also requires that Bonneville, the Corps of Engineers, the Bureau of Reclamation, and the Federal Energy Regulatory Commission must also take the Program into account at each relevant stage of decision making to the maximum extent practicable. In addition, Bonneville has responsibilities to fund measures under the FCRPS Biological Opinion. The Federal District Court has made it clear that needed protection and recovery actions must be reasonably likely to occur.

The Council Fish and Wildlife Program relies heavily on off-site habitat and production strategies to partially offset the mortality associated with mainstem passage and the loss of habitat caused by the dams. The Northwest Power Act gave Bonneville the authority to implement the off-site actions necessary to achieve the Council Program goal. In the mid-1980's, the Council went through an extensive public decision process to identify the loss of salmon and steelhead. The study concluded that salmon and steelhead populations had

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declined by seven to fourteen million and that natural salmon runs were less than five percent of historical levels. The Council concluded that the dams were responsible for five to eleven million of the fish losses. The Council set an interim goal of "doubling the runs"—increasing populations from two-and-a-half to five million salmon and steelhead; this would mean rebuilding about half of the fish populations lost under the low end of the Council determination of hydro responsibility and one-quarter of the hydro related losses at the high end of the NPCC range. The Council said it would reevaluate a higher goal once the interim target was achieved. See the 1987 Columbia River Basin Fish and Wildlife Program, pages 34 to 44.

In 2000, the NPCC modified the Program goal to increase total adult salmon and steelhead runs above Bonneville Dam by 2025 to an average of 5 million annually in a manner that supports tribal and non-tribal harvest (see the 2000 Columbia River Basin Fish and Wildlife Program, pages 16-17. This is the goal of the Program and relates directly to the losses associated with the hydroelectric system.

Under the Northwest Power Act, the BPA, the Bureau of Reclamation, the Corps of Engineers, and the Federal Energy Regulatory Commission are responsible for implementing the Program and achieving its goal. Other entities would be responsible for addressing rebuilding separate from the five million fish goal in the Program that is related to the hydropower responsibilities identified by

the Council. For example, the CBFWA workgroup budget for the subbasin plans did not assume BPA funding for actions on federal lands; Federal land managers, not BPA are assumed to implement these actions.

Fish and wildlife managers have not determined whether full implementation of the subbasin plans would result in an increase in returns to five million salmon and steelhead. Fish and wildlife managers and the Council are currently working to aggregate the expected biological results from implementation of the plans.

The Tribes believe that it is unlikely that the funding levels we have recommended would result in salmon and steelhead returns that exceed the Council's goal by 2009. Therefore, these funding levels will not exceed BPA's responsibilities under the Program.

Therefore, the Tribes believe that the implementation of the subbasin plans should proceed with funding from BPA. Had Bonneville proposed any "consistent" program, we would consider that as well, but it has failed to do so and accordingly there is no alternative for analysis. If subsequent analysis or monitoring indicates that fish and wildlife populations are likely to exceed the goal for the Fish and Wildlife Program established by the Council, then the Council should initiate a rulemaking to address this issue.

Q. IS IT LIKELY THAT OTHER ENTITIES WILL PAY FOR THE MEASURES IN THE COUNCIL PROGRAM, BIOLOGICAL OPINION AND RECOVERY PLAN?

A. No. Given the current pressures on the Federal budget, it is our professional judgment that it is unlikely that additional Federal appropriations will be available to fund the Columbia River Basin Fish and Wildlife Program, the FCRPS Biological Opinion, and the recovery plans for listed species in the Columbia Basin. Therefore, if Bonneville does not provide adequate funding it is unlikely that these plans will be implemented.

We support partnerships in the implementation of fish and wildlife measures; however, it is not prudent to assume significant additional Federal funding. Therefore, the logical consequence of inadequate Bonneville funding levels is that the objectives of these plans will not be accomplished or the costs will be shifted to state and local governments and private landowners. Bonneville objected to our data request seeking "any information or analysis regarding BPA's evaluation of other entities that have responsibilities to fund the subbasin plans under the Northwest Power Act (PL. 96-501)." See data response CR-BPA-032, incorporated by reference as WP-07-E-CR-01DD.

Q. HAS BPA EVALUATED ITS FISH AND WILDIFE OBLIGATIONS?

A. No. In response to a data request, Bonneville stated that it "does not have any specific information or analysis evaluating BPA meeting its fish and wildlife obligations. BPA will meet whatever fish and wildlife obligations we have." See data response CR-BPA-035, incorporated by reference as WP-07-E-CR-01EE.

Q. HAS BPA ADEQUATELY ADDRESS THE COSTS TO PROTECT TRIBAL CULTURAL RESOURCES?

A. No. The Tribes have raised this issue for many years. Bonneville's cultural resources funding is not adequate to protect the many cultural, religious, and grave sites that are critically important to the Columbia Basin Indian tribes. We view this issue as an important part of Bonneville's trust responsibility.

Q. HOW SHOULD BPA ADJUST ITS PROPOSAL TO ENSURE THAT ITS TOTAL SYSTEM COSTS ARE BASED ON THE BEST INFORMATION AVAILABLE?

A. Bonneville should adjust its estimate of total system costs to reflect the costs of implementing subbasin plans that were developed by the CBFWA workgroup and recommended by the Tribes in this testimony in its revenue requirements. As discussed above, the Tribes are recommending average funding of $222 per year for the Integrated Fish and Wildlife Program. These costs are the best information available. If Bonneville continues to take the policy position that it cannot use its borrowing authority for land and water acquisition, then it should increase the annual costs to implement the subbasin plans by $70 million. In addition, Bonneville should revise its cost adjustment mechanisms to adequately address other costs that may be needed to implement the new biological opinion and recovery plans—we address this issue in more detail below.

Section 5. Revenue Forecast

Q. HAS BONNEVILLE ASSUMED THE CORRECT OPERATION OF THE FCRPS DURING THE RATE?

A. No. Bonneville has assumed that it will implement the 2004 Biological Opinion in its analysis for the rate proposal (see WP-07-E-BPA-09 Pages 11 to 13). This is an unrealistic assumption that overestimates the amount of revenue that Bonneville is likely to generate. The Federal District Court of Oregon has found that the 2004 Biological Opinion violates the ESA. Moreover, the court has ordered fish operations in 2005 and 2006 that are different from and more costly than the 2004 Biological Opinion. Bonneville's assumption makes it less likely that Bonneville's rates are adequate to assure repayment to the Treasury after meeting its costs. We further address these likelihoods in Section 6 of this testimony.

Q. ARE BETTER ESTIMATES AVAILABLE?

A. Yes. Bonneville estimated the added costs of the Court-ordered river operation for 2005 at $75 million; its estimates of the 2006 Court-ordered operations are $60 million. The Tribes believe that, at a minimum, Bonneville should assume the continuation of the court-ordered 2006 operations through FY 2009 in its base forecast. In addition, Bonneville should revise its cost adjustment mechanisms to adequately address other costs that may be needed to implement the new biological opinion and recovery plans—we address this issue in more detail below.

Q. HAS BPA ANALYZED THESE COSTS?

A. No. In a data response Bonneville states that it "does not have any information nor has it conducted any analysis for the purposes of BPA's Initial Proposal regarding the impacts of the 2005 injunctive relief for river operations ordered by Judge Redden" See CR-BPA-010, herein incorporated as attachment WP-07-E-CR-01FF.

Q. ARE THERE UNCERTAINTIES ASSOCIATED WITH THE REVENUE FORECAST?

A. Yes. The plaintiffs in the 2004 Biological Opinion litigation have recommended additional flow and spill measures. While the Court has not ordered all that all of these recommendations should be implemented, the plaintiffs' proposal for FY 2006 operations should be evaluated as one of the uncertainties that Bonneville faces in the future.

Bonneville estimated that the plaintiffs' proposed operations would add $347 million per year compared to the 2004 Biological Opinion with a range that showed that BPA actually could have lower costs of $28 million to higher costs of $541 million. At the estimated cost of $347 million, BPA states that it would receive a U.S. Treasury credit of $45 million (Pursuant to Section 4(h)(10)(C) of the Northwest Power Act), so the net impact would average $302 million (see WP-07-E-CR-01GG on Page 7 at 14). CRITFC staff calculated the cost of the proposed injunction operations at $202 million; the net increase (after estimating

the Treasury credit) would be approximately $176 million over the 2004 Biological Opinion (see WP-07-E-CR-01HH on Page 5 at 7).

Bonneville has not evaluated these uncertainties. See CR-BPA-050, herein incorporated as attachment WP-07-E-CR-01Y, CR-BPA-011, herein incorporated as attachment WP-07-E-CR-01II and CR-BPA-009, herein incorporated as attachment WP-07-E-CR-01JJ.

Section 6. Risk Analysis

Q. PLEASE SUMMARIZE YOUR CONCERNS

A. Bonneville has not adequately addressed the uncertainties it faces for future fish and wildlife costs and other costs. It has not adequately addressed the uncertainty it faces for future revenues. Its proposed cost adjustment mechanisms are not adequate to assure repayment to the Treasury after meeting its costs.

Q. HAS BONNEVILLE'S PROPOSAL ADEQUATELY ADDRESSED THE UNCERTAINTY ASSOCIATED WITH FISH AND WILDLIFE COSTS?

A. No. In the testimony above we have provided evidence that Bonneville has not adequately budgeted for implementation of the Biological Opinions and the Fish and Wildlife Program. We also documented the uncertainties associated with development of the new biological opinion, recovery plans, and subbasin plans. Bonneville's decision to eliminate the range of fish and wildlife costs in the risk analysis means that it does not consider any of these uncertainties. Therefore, we believe it is likely that Bonneville has not proposed rates that are adequate to meet its costs.

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In a data request we asked Bonneville to provide any data, analysis, documentation, and related materials that address BPA's fish and wildlife cost uncertainty assumptions. We asked them to include any analysis of the uncertainties BPA considered related to changes that could be associated with Treaty Trust responsibilities; changes that could result from the reviews of the FCRPS biological opinions, the Clean Water Act, the Fish and Wildlife Coordination Act; and potential changes associated with ESA recovery planning and the NWPPC subbasin plans. Bonneville responded that "NORM did not account for any of the major uncertainties described in the request. Its focus was on the potential cost variability of current actions, assuming no major shift in emphasis or additional requirements being placed on the FCRPS" (see CR-BPA-050, herein incorporated as attachment WP-07-E-CR-01Y).

We also requested a copy of any information regarding the range of costs that were assumed in evaluating the NFB adjustment, including the probability distribution for these costs. Bonneville responded that it "has not conducted any analysis regarding the range of cost associated with the NFB adjustment. BPA did not conduct this analysis because the proposed rate design for the NFG [sic] adjustment accommodates and impact of changes in river operations." See CR-BPA-004, herein incorporated as attachment WP-07-E-CR-01KK). As we demonstrate below, the NFB does not accommodate these impacts.

Q. HAS BONNEVILLE ADEQUATELY ADDRESSED THE UNCERTAINTY ASSOCIATED WITH PENDING LITIGATION?

A. No. In a data request we asked Bonneville to provide any data, analysis, documentation, and related materials that address BPA's fish and wildlife cost

uncertainty assumptions. We asked them to include any analysis of the uncertainties BPA considered related to litigation regarding the adequacy of the FCRPS Biological Opinion, or other pending litigation. Bonneville responded that it "performed no risk analysis regarding the uncertainties related to litigation regarding the adequacy of the FCRPS Biological Opinion or any other pending or threatened litigation." (See CR-BPA-050, herein incorporated as attachment WP-07-E-CR-01Y).

Q. IS BPA'S PROPOSAL ADEQUATE TO ADDRESS THE UNCERTAINTY THAT IT FACES?

A. No. As we discuss below, we have used the Bonneville Toolkit model to analyze some of the uncertainties that it faces and concluded that its proposal is not adequate to assure repayment of the Treasury after meeting its costs.

Q. IS BPA'S PROPOSED CRAC MECHANISM ADEQUATE TO ADDRESS THE COSTS OF IMPLEMENTING THE COLUMBIA RIVER BASIN FISH AND WILDLIFE PROGRAM?

A. No. We analyzed two cases where the costs associated with implementing the Columbia River Basin Fish and Wildlife Program were higher than Bonneville has assumed. In this analysis, we relied on the CRAC mechanism, but not the NFB, since the later mechanism, as proposed by Bonneville, is only available for added costs associated with implementing the Endangered Species Act, not the Northwest Power Act. In the first case, we added in the Tribes' recommendations for the direct program that are discussed above. This would add an additional $57

million in FY 2007, $82 million in FY 2008, and $97 million in FY 2009. We added these costs to the Toolkit cells N25, N26, and N27 respectively. These assumptions reduced the Treasury Payment Probability (TPP) from Bonneville's target of 92.6 percent down to 83.7 percent (see attachment WP-07-E-CR-01LL). We also analyzed the impact of Bonneville's assumption that it would not be able to use its borrowing authority for the land and water acquisitions in the habitat work in the Program. This assumption increases the costs above by $70 million per year and reduces the TPP to 77 percent (see attachment WP-07-E-CR-01MM). Clearly, Bonneville's proposal is not adequate to address these costs and uncertainties and meet its target for repayment to the Treasury.

Q. ARE BPA'S PROPOSED CRAC AND NFB MECHANISMS ADEQUATE TO ADDRESS THE COSTS OF IMPLEMENTING THE FCRPS BIOLOGICAL OPINION?

A. No. We analyzed several alternatives using the Toolkit model. In these cases, we added the cost of the ESA operations in Toolkit cells N25, N26, and N27 and to the CRAC limits in cells F25, F26, and F27 of the model. The first alternative assumed that the costs associated with the 2006 Court ordered operation would continue for FY 2007 through FY 2009. We assumed that the market costs were the same as Bonneville assumed in its proposal. This resulted in reduced revenues of $36 million in FY 2007, $32 million in FY 2008, and $30 million in FY 2009 assuming average water conditions (see attachment WP-07-E-CR-01N. If market costs were higher, these impacts would also increase. These additional

costs result in a TPP of 89.7 percent (see attachment WP-07-E-CR-01NN). We also analyzed the impacts of the plaintiffs' proposal for 2006. If the Court ordered these operations for FY 2007 through FY 2009 it would reduce revenues of $249 million in FY 2007, $211 million in FY 2008, and $195 million in FY 2009 assuming average water conditions (see attachment WP-07-E-CR-01OO). These impacts would reduce the TPP to 73 percent (see attachment WP-07-E-CR-01PP). This raises significant concerns about whether needed protection and recovery actions are reasonably likely to occur.

Q. DID BPA EVALUATE WHETHER ITS PROPOSED CRAC AND NFB MECHANISMS ARE ADEQUATE TO ADDRESS THE COSTS OF IMPLEMENTING THE BIOLOGICAL OPINION?

A. No. Bonneville did not conduct TPP analysis of the impact of additional costs associated with the biological opinion (see CR-BPA-004 incorporated as attachment WP-07-E-CR-01QQ, CR-BPA-008 incorporated as attachment WP-07-E-CR-01RR, CR-BPA-012 incorporated as attachment WP-07-E-CR-01SS, CR-BPA-019 incorporated as attachment WP-07-E-CR-01TT, CR-BPA-020 incorporated as attachment WP-07-E-CR-01UU, and CR-BPA-021 incorporated as attachment WP-07-E-CR-01VV. Bonneville did not analyze the probability that the NFB adjustment would be triggered (see CR-BPA-003, incorporated by reference as attachment WP-07-E-CR-01WW. In several data responses Bonneville states that it did not conduct the analysis because the proposed rate

design of the NFB adjustment accommodates any impact of river operations. Our analysis above demonstrates that Bonneville's assertion is not accurate.

Q. ARE BPA'S PROPOSED CRAC AND NFB MECHANISMS ADEQUATE TO ADDRESS THE COSTS OF THE FEDERAL GOVERNMENT'S PLAN FOR IMPLEMENTING THE FCRPS BIOLOGICAL OPINION?

A. No. In Bonneville's declaration in the injunctive relief hearing for the 2006 operation of the FCRPS as part of the Biological Opinion litigation, the second declaration of Roger Schiewe analyzes the Federal Plan for Operation in 2006 and concludes that the costs would be $43 million in an average water year (see attachment WP-07-E-CR-01XX pages 15-19). We added this cost for FY 2007 through FY 2009. The additional costs of the Federal Plan would reduce the TPP to 88.8 percent (see attachment WP-07-E-CR-01YY). This raises significant concerns about whether needed protection and recovery actions are reasonably likely to occur.

Q. DID BPA EVALUATE WHETHER ITS PROPOSED CRAC AND MECHANISM ARE ADEQUATE TO ADDRESS THE COSTS OF IMPLEMENTING THE FEDERAL PLAN FOR OPERATIONS?

A. No. In response to a data request, BPA has stated that "no analysis has been conducted regarding the impacts of the federal plan for river operations for FY 2006." (see CR-BPA-013 incorporated as attachment WP-07-E-CR-01ZZ).

Q. ARE BPA'S PROPOSED CRAC AND NFB MECHANISMS ADEQUATE TO ADDRESS THE COSTS OF IMPLEMENTING THE FCRPS BIOLOGICAL OPINION AND THE COLUMBIA RIVER BASIN FISH AND WILDLIFE PROGRAM?

A. No. We used the Toolkit model to analyze two cases where Bonneville would implement the Court-ordered river operations under the biological opinion litigation and the Columbia Basin Fish and Wildlife Program. We first analyzed a low case that assumes that the 2006 river operations would be implemented in FY 2007 through FY 2009 and that Bonneville would implement the Columbia River Basin Fish and Wildlife Program based on the Tribes' recommended budgets. The low case would add $96 million in FY 2007, $114 million in FY 2008, and $127 million in FY 2009 assuming average water conditions. The low case results in a TPP of 80.7 percent (see attachment WP-07-E-CR-01AAA).

In the high case, we assumed that the plaintiffs' 2006 proposed river operations would be implemented in FY 2007 through FY 2009 and that Bonneville would not use its borrowing authority to acquire land and water as it implemented the Program. The high case would add $376 million in FY 2007, $363 million in FY 2008, and $362 million in FY 2009 assuming average water conditions. The high case results in a TPP of 57.7 percent (see attachment WP-07-E-CR-01BBB).

Q. IS THE NFB EFFECTIVE IN MEETING THE TPP GOAL?

A. No. We ran the Toolkit using the cost assumptions described above in the low case, but without increasing the CRAC limit. This lowered the TPP from 80.7 percent to 80.2 percent—the NFB has an impact of 0.5 percent (see attachment WP-07-E-CR-01CCC). We also ran the high case without increasing the CRAC limit and found

that it lowered the TPP from 57.7 percent to 53.2 percent—the NFB has an impact of 4.5 percent in cases that are already very low (see attachment WP-07-E-CR-01DDD). Therefore, it appears that the NFB, as currently designed, has very little impact on improving TPP.

Q. HAS BPA ANALYZED THE NFB ADJUSTMENT?

A. No. We requested any information or analysis of the TPP if the NFB adjustment is implemented. The responses stated that "BPA has performed no TPP analyses of the NFB adjustment." See data response CR-BPA-038, incorporated by reference as WP-07-E-CR-01EEE.

Q. HAS BONNEVILLE EVALUATED THE RISK OF MULTIPLE DEFERRALS OF PAYMENTS TO THE TREASURY?

A. No. In the WP-02 and SN-03 rate cases, the Tribes expressed concerns that Bonneville treated cases that deferred payments to the Treasury two, three, or four years out of five the same as a case the deferred one Treasury Payment. We raised concerns that this approach significantly underestimated the risks that Bonneville faced. Clearly the consequences of multiple deferrals were much more significant than a single deferral. In response to a data request, Bonneville responded that it "had not performed this analysis, but has provided data that makes this readily possible." (See data response CR-BPA-16, herein incorporated by reference as attachment WP-07-E-CR-01FFF). We believe that this analysis is important and that Bonneville should have evaluated this risk. We note that when Save Our Wild

Salmon examined this issue, they found that of the 221 runs that had a deferral, 54—about one quarter—had more than one deferral.

Q. WHY ARE THE TRIBES CONCERNED ABOUT BPA'S ABILITY TO REPAY THE TREASURY?

A. Based on Bonneville's rate methodology, when Bonneville underestimates its costs or overestimates its revenues, it reduces the probability that it will be able to assure repayment to the Treasury after meeting its costs. This forces Bonneville to choose between making its Treasury payment and reducing its costs. In the past, when faced with these options, Bonneville has decided to reduce fish and wildlife protections and programs.

Q ARE THERE EXAMPLES WHERE BPA HAS REDUCED PROTECTION FOR FISH AND WILDILFE RATHER THAN DEFER PAYMENT TO THE TREASURY?

A. Yes. During the 2001 drought, Bonneville's rates were not sufficient to ensure payment to the Treasury after meeting its costs. Rather than deferring a Treasury payment, Bonneville triggered a "financial emergency and eliminated river operations for salmon and steelhead. BPA was faced with the choice of deferring payments to the Treasury or deferring fish and wildlife protection. BPA decided to declare an "emergency" and suspend the fish protection measures at the dams. The reason given for this action by the BPA Administrator was that "There would be political fallout. We want to operate without creating the view that taxpayers are subsidizing the federal Columbia River system, he said. If Congress thinks

there is a subsidy, the region could lose control of the federal system." (see attachment WP-07-E-CR-01GGG Equitable Treatment ER (AR 2455). Bonneville's rationale for the emergency provisions was that "failure to make a Treasury payment would encourage administrative and congressional review and possible limitation on BPA operations." (see attachment WP-07-E-CR-01HHH page 16). The Tribes and other parties raised significant concerns about these actions and the failure of Bonneville to mitigate for the elimination of the fish protection measures (see attachment WP-07-E-CR-01III).

More recently, Bonneville raised concerns about the tradeoff between river operations to protect fish and repayment to the Treasury in the litigation regarding the 2004 FCRPS Biological Opinion. In his declaration regarding the proposed 2006 river operation, Mr. Paul Norman, Bonneville's senior vice-president stated that "The fundamental measure of BPA's financial integrity is the probability of making its annual debt service payment to the U.S. Treasury at the end of each fiscal year." Mr. Norman raised concerns that the proposed operation would increase the probability that it could not make these payments (see WP-07-E-CR-01GG at page 11, paragraph 21). This declaration raises the concern that Bonneville's current cost recovery mechanisms are not adequate to ensure Treasury repayment after meeting its costs. We are concerned that Bonneville's rate proposal appears to be setting the stage for future conflicts between recovery actions and the fundamental measure of its financial integrity.

Q. HAS BONNEVILLE ADEQUATELY ADDRESSED THE UNCERTAINTY OF SECONDARY REVENUE?

A. Based on Bonneville's recent experience, it is not possible to accurately forecast West Coast electricity market costs. For example, the manipulation of the California electricity market in 2000 and 2001 caused unprecedented increases in costs. Some parties have urged Bonneville to increase its estimates for secondary revenues. We believe that a conservative approach is appropriate and note that during the Financial Choices process, Bonneville revealed that it had overestimated its secondary revenues by $710 million in the WP-02 rate case. Given this large mistake, and the complexity of estimating these costs, Bonneville should assume that there will be significant uncertainty associated with these costs and use conservative assumptions about secondary revenues (see WP-07-E-CR-01JJJ.

Q. HAS BONNEVILLE ADEQUATELY ADDRESSED THE UNCERTAINTY ASSOCIATED WITH ITS INTERNAL COSTS AND THE COSTS OF THE BUREAU OF RECLAMATION, CORPS OF ENGINEERS, AND ENERGY NORTHWEST?

A. Based on the experience of the WP-02 rate case, we question whether Bonneville has adequately addressed the uncertainty associated with these costs. In the Tribes testimony on the SN-03 rate case we provided evidence that Bonneville's estimate in WP-02 for the costs associated with the Bureau of Reclamation, the Corp of Engineers, and Energy Northwest were too low by $349 million. That is a significant underestimation of costs. The assumption that the new estimates are

certain does not seem reasonable given the recent history. We also note that Bonneville's internal costs reported during Financial Choices were approximately $222 million higher than the assumptions made in the WP-02 rate case (See attachment WP-07-E-CR-01KKK, page 5, lines 21-26 Bonneville reported that its internal costs were $279 million higher than the forecast in the May 2000 proposal. The assumption that the new estimates are certain does not seem reasonable given the recent history. Given these large changes during the current rate period, we are concerned that Bonneville has underestimated the uncertainty associated with these costs through FY 2009.

Q. HOW SHOULD BONNEVILLE MODIFY ITS PROPOSAL TO ADDRESS THE FISH AND WILDLIFE AND OTHER UNCERTAINTIES IT FACES?

A. Bonneville should incorporate the Tribes recommendations for fish and wildlife funding in its revenue requirements. It should modify its cost recovery mechanisms to collect additional costs as soon as they are identified. We discuss these issues below.

Section 7. CRAC and NFB Rate Adjustment Design

Q. HOW COULD BPA IMPROVE THE CRAC?

A. We demonstrated in the previous section that the current CRAC design will not ensure that BPA can meet its TPP goal and also fully implement the Columbia River Basin Fish and Wildlife Program. Bonneville could improve its probability of

making its Treasury Payments if it incorporated the Tribes' recommendations for the Integrated Fish and Wildlife Program into its revenue requirements and also into its base rates. Bonneville should also eliminate or increase the limit on how much can be collected by the CRAC. Finally, Bonneville should make the CRAC forward looking—it should begin collecting additional revenues as soon as the obligations are established and continue to collect the funds as long as the obligations are in place. Bonneville should ensure that these cost adjustments maintain its TPP goal on a three-year rolling average.

Q. HAS BPA ANALYZED A FORWARD-LOOKING CRAC?

A. No. In a data response, BPA states that it "has no information or analysis regarding the impacts on TPP of a forward looking CRAC." (See data response CR-BPA:015, herein incorporated by reference as attachment WP-07-E-CR-01LLL).

Q. HOW COULD BPA IMPROVE THE NFB?

A. We have demonstrated in our testimony that the current design of the NFB will not assure repayment to the Treasury if there are additional costs associated with Court orders, the FCRPS Biological Opinion, or the new recovery plans. We understand that Bonneville will incorporate ESA related costs in base rates if they are known prior to the final studies (See data response CR- BPA-043 and CR-BPA-045, herein incorporated by reference as attachment WP-07-E-CR-01MMM and WP-07-E-CR-01NNN). The current Court schedule makes it unlikely that the

costs for FY 2007 through FY 2009 will be known by late April or the beginning of May.

Therefore, to improve the CRAC design, Bonneville should, at a minimum, incorporate the Court-ordered 2006 operations into its base revenue and cost assumptions. In addition, Bonneville should modify the NFB design so that it triggers whenever an ESA obligation is established and the NFB should collect the full costs of the obligation for as long as the ESA costs exist. Bonneville should ensure that these cost adjustments maintain its TPP goal on a three year rolling average. This would improve the probability that needed protection and recovery actions are reasonably likely to occur.

Q. HAS BPA ANALYSED A FORWARD LOOKING NFB?

A. No. "BPA does not have any analysis regarding the impacts on TPP of an NFB cost recovery mechanism that would begin to collect additional revenue once an additional fish and wildlife cost had been established (for example, a forward-looking CRAC)." (See data response CR-BPA-041, herein incorporated by reference as attachment WP-07-E-CR-01OOO).

Q. DO YOU HAVE OTHER CONCERNS ABOUT THE NFB?

A. Yes. The description of the NFB states that The NFB Adjustment will address changes in financial results due to the anadromous fish portion of Fish and Wildlife cost categories only when those impacts result from changes in FCRPS Endangered Species Act (ESA) compliance as required by a court order

(including court-approved agreements), an agreement related to litigation, a new NMFS FCRPS Biological Opinion, or Recovery Plans under the ESA. However, the methodology for the NFB on page 84 details a formula where "the modeled operation of the power system under the total set of fish and wildlife mitigation measures actually employed for the current fiscal year, net of estimated 4(h)(10)(C) credits is compared to the modeled operation of the power system under the same set of fish and wildlife mitigation measures except with the removal of the court-ordered changes for the current fiscal year, net of estimated 4(h)(10)(C) credits" (emphasis added). In a data response, Bonneville states that "changes in 'direct program expenses,…Corps of Engineers and Bureau of Reclamation Operations and Maintenance, and capital repayment' will be captured only in the after financial impacts analysis." (See data response CR-BPA-001, herein incorporated by reference as attachment WP-07-E-CR-01PPP). Bonneville should modify the explanation of the NFB cost adjustment to make it clear that it will include all ESA related costs, including the Integrated Fish and Wildlife Program (the direct program). The explanation should make it clear that the adjustment is not limited to modeled operation costs.

Q. WHAT ARE YOUR CONCERNS ABOUT THE DDC?

A. Bonneville's proposal includes a mechanism to pay dividends to its customers when its reserves are above a certain level. This mechanism will reduce the size of the reserve and reduce Bonneville's ability to repay the Treasury after meeting it costs.

We are also concerned that if Bonneville reduces its reserves, it will make it more difficult to meeting its Treasury repayment obligations in future rate periods. The Tribes have documented several cases where Bonneville has used its financial situation as a rationale to limit fish and wildlife protection. Bonneville should eliminate the DDC provision. As an alternative, Bonneville could fully implement our recommendations on incorporating fish and wildlife costs in its revenue and cost assumptions and modify its CRAC and NFB design. If Bonneville can demonstrate that these changes allow it to meet its TPP goal on a three-year rolling average under the range of cost assumptions we have described, then the Tribes would reconsider our opposition to the DDC.

Section 8. Rate and Economic Impacts

Q. HOW DO THE RATES PROPOSED BY BPA COMPARE TO MARKET RATES?

A. Based on our analysis, Bonneville rates are currently 59 percent below the Market rates that Bonneville has assumed for FY 2006. This comparison is based on a flat block of power from Bonneville with a 100 percent load factor. We believe that this product is much more valuable than market power because of the reliability of the Bonneville system; therefore, our comparison underestimates the benefit of Bonneville's rates compared to the market.

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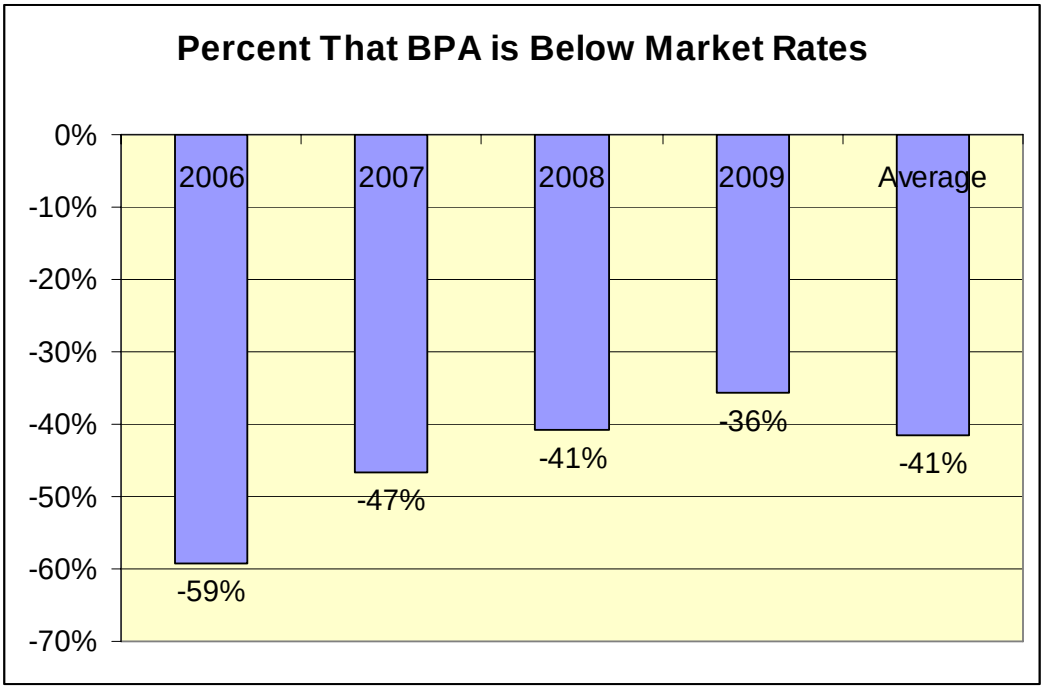
Bonneville has assumed much lower market rates for the next rate period. We questioned these assumptions earlier in our testimony, but use them here for the comparison. Based on Bonneville's rate proposal for a flat block product, we calculate that BPA will be approximately 47 percent below the market rate for electricity that it projects in FY 2007, 41 percent below the projection for FY 2008, and 36 percent below FY 2009 market rates. On average, Bonneville would be 41 percent below market rates during the rate period (see attachment WP-07-E-CR-01QQQ and the figure below.



Q. IF BPA ADOPTED THE TRIBES' RECOMMENDATIONS, WHAT IS THE IMPACT ON BPA RATES?

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A. We have estimated the impacts of the low and high cost fish and wildlife alternatives based on our recommendations for both the revenue and cost impacts and the why they would be incorporated into Bonneville rates. We used a rule of thumb that $59 million would increase Bonneville rates by $1 per megawatt-hour.

We also assumed that under the recent settlement of the residential exchange program, customers of investor-owned utilities would not pay any of the added costs. As a result, all of the additional fish and wildlife cost must be allocated to a smaller group of customers and the impacts are more significant than the allocation in the WP-02 rate case. On October 10, 2004, CRITFC wrote to Bonneville expressing concern about any settlement that moves additional costs into the next rate period because it will make it more difficult for BPA to meet its obligations under Federal laws and the treaties with our member tribes. We were assured informally that the settlement would not affect fish and wildlife (see attachment WP-07-E-CR-01RRR).

We emphasize that these are potential rate impacts; if Bonneville has higher revenues or lower costs than it has assumed then the impacts would be less. We also note that Bonneville decreased rates by 1.6 percent in 2005 after implementing the Court-order operations in 2005.

Based on our analysis, we found that the high assumptions described above (*i.e.* the plaintiffs' recommendation for flow and spill and the assumption that Bonneville would expense all habitat work) would result in a potential rate

impact of $0.00622 per kilowatt hour. For an average customer of a utility that purchases all of its electricity from Bonneville, this could result in an increase of $6.22 per month—an increase of approximately 9 percent.

Bonneville serves approximately 40 percent of the region's power, so the impact on most ratepayers would be less. We analyzed three other cases: a utility that purchase 70 percent of its power from Bonneville, a utility that purchase 30 percent of its power from Bonneville (for example, Seattle City Light, Tacoma City Light) and investor-owned utilities. In the high case, the average customer of a utility that purchases 70 percent of its power from Bonneville could pay an additional $4.35 per month—a 6.5 percent increase. A customer served by a utility that purchases 30 percent of its power from Bonneville could pay $1.87 per month—a 2.8 percent increase. Customers of investor-owned utilities would experience no rate impact from the added fish and wildlife measures.

In the low case, we assumed that Bonneville used its borrowing authority to finance some of the land and water acquisitions in the habitat measures under the Integrated Fish and Wildlife Program and that the Court-ordered river operation for FY 2006 would also be implemented during the rate period. In the low case, the average consumer that is served by a utility that that purchase all of its power from Bonneville could pay an additional $1.90 per month—a 2.9 percent increase. If the utility purchased 70 percent from Bonneville, the monthly impact could be $1.33—a 2 percent increase. Consumers served by a utility that

purchases 30 percent of its power from BPA could pay an additional $0.57 per month—a 0.9 percent increase. Customers served by investor-owned utilities would not pay any of the additional costs under the residential exchange settlement.

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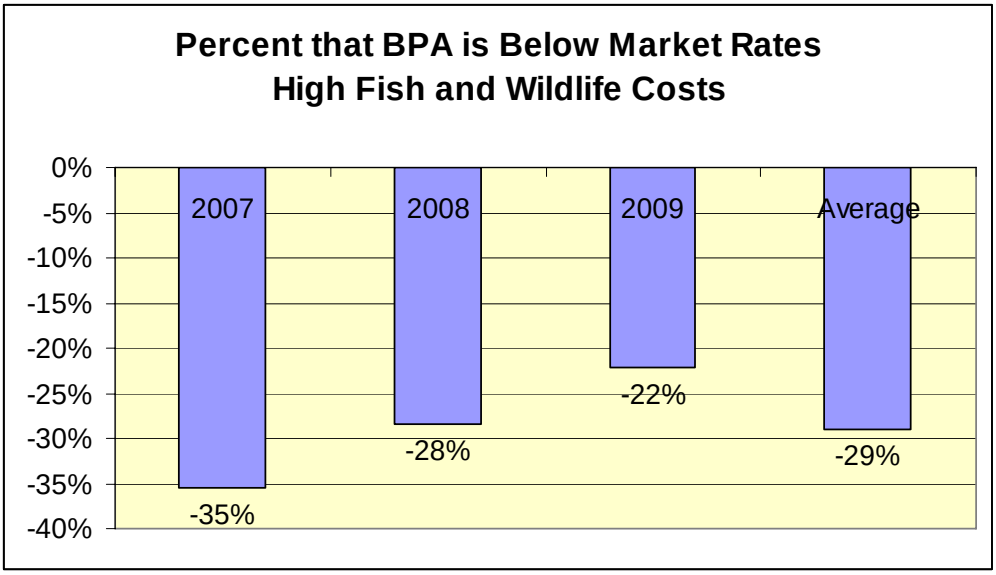
The table below summarizes these potential impacts.

Potential Rate Impacts			
High Cost Alternative			
Power from BPA	**Cost per kWh**	**Monthly Cost**	**Increase**
100%	$0.00622	$6.22	9.4%
70%	$0.00622	$4.35	6.5%
30%	$0.00622	$1.87	2.8%
Investor-owned	0	0	0%
Low Cost Alternative			
Power from BPA	**Cost per kWh**	**Monthly Cost**	**Increase**
100%	$0.00190	$1.90	2.9%
70%	$0.00190	$1.33	2.0%
30%	$0.00190	$0.57	0.9%
Investor-owned	0	0	0%

Q. IF BPA ADOPTED THE TRIBES' RECOMMENDATIONS, HOW WOULD BPA RATES COMPARE TO MARKET RATES?

A. We added the additional costs described above to the proposed block power rates and compared them to Bonneville's assumptions about the market price of electricity during the rate period. We found that even with these added costs, Bonneville would be significantly below market. For example in the high fish and wildlife case, Bonneville rates would be approximately 35 percent below the market rates in 2007, 28 percent below market in 2008, and 22 percent below market in 2009. The change in relationship to market prices is primarily a function of Bonneville's assumptions about declining market prices.



In the low case, Bonneville rates would be approximately 43 percent below the market rates in 2007, 37 percent below market in 2008, and 31 percent below market in 2009 (see attachment WP-07-E-CR-01SSS).

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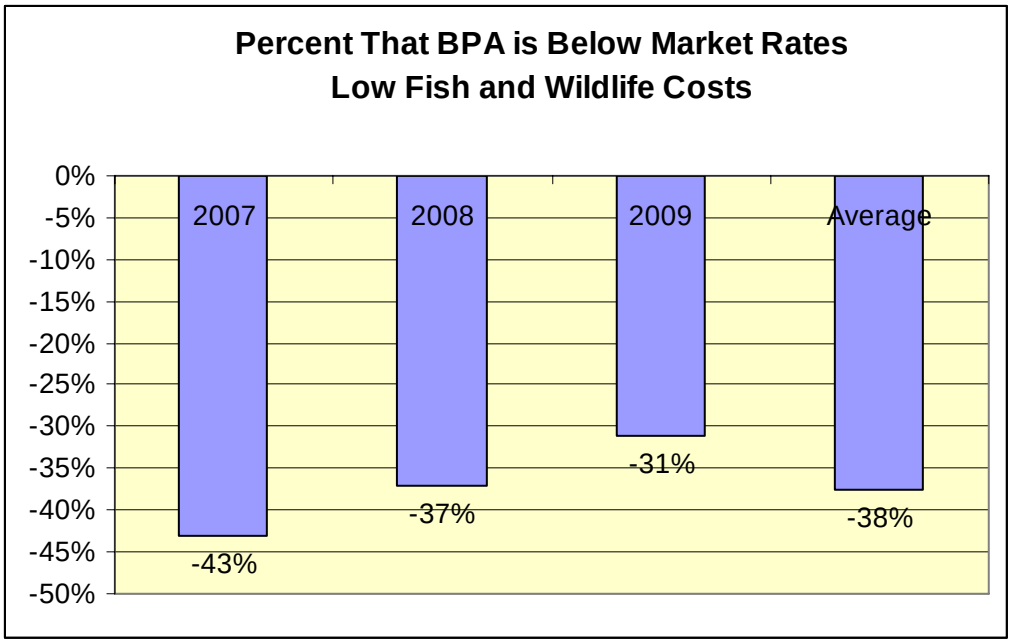

Q. WHAT ANALYSIS DOES BPA PROVIDE ON THE IMPACTS OF ITS RATES ON THE NORTHWEST ECONOMY?

A. We asked Bonneville to provide a copy of any information or analysis regarding the impacts of BPA's rates on the regional economy and to provide all relevant documentation and analyses, including email and other correspondence. Bonneville responded that it had conducted no such analysis for the development of the rate proposal. (See data response CR- BPA-049 herein incorporated by reference as attachment WP-07-E-CR-01TTT). Given that Bonneville's rates are significantly below market rates and lower than most other parts of the country, we believe that Bonneville can incorporate the costs to fully implement the Council Program and the Biological Opinion and still benefit the Northwest economy.

Q. WHAT ANALYSIS DID BPA PROVIDE ON THE IMPACT OF ITS PROPOSAL ON RURAL AND TRIBAL COMMUNITIES?

A. We asked Bonneville to provide a copy of any information or analysis regarding BPA's evaluation of the economic, biological, cultural, or other relevant impacts of implementing the subbasin plans for fish and wildlife. Bonneville objected to the request, arguing that it calls for information outside the scope of this rate proceeding. (See data response CR- BPA-046, herein incorporated by reference as attachment WP-07-E-CR-01UUU).

Q. HOW WOULD THE TRIBES' RECOMMENDATIONS AFFECT RURAL AND TRIBAL COMMUNITIES?

A. Most of the fish and wildlife activities discussed above would be implemented in rural areas east of the Cascade Mountains. These investments pay salaries and purchase materials creating additional jobs and economic activity. The effects of these investments can be expected to ripple through the tribal and rural economies, creating thousands of additional jobs and significant economic activity. As fish and wildlife populations increase as a result of these BPA investments, east-side tribal and rural areas will experience increased spending by fishers, hunters, and recreationalists creating additional jobs and economic benefits. For example, in 2001, as a result of previous investments in salmon mitigation and improvements in ocean conditions, salmon runs increased sufficiently for Idaho to open a recreational fishing season on salmon. The Idaho Department of Fish and Game examined the economic benefits of the 2001

salmon season and found that the increased fish opportunity was responsible for almost $90 million in expenditures. These expenditures were split evenly between the local river communities and the rest of the state. However, impacts were more significant in the smaller local economies. Angler expenditures in Riggins, Idaho (on the Salmon River) during the salmon fishing season stimulated 23 percent of the town's annual sales. (See attachments WP-07-E-CR-01Q and R).

Any analysis of the impacts on tribal communities should incorporate the work prepared for CRITFC entitled: *Tribal Circumstances and Impacts of the Lower Snake River Project on the Nez Perce, Yakama, Umatilla, Warm Springs and Shoshone Bannock Tribes* see http://www.critfc.org/legal/circum_summ.pdf. This report found that the FCRPS has had a devastating impact on tribal culture, economy, and religion. It evaluated a number of criteria such as unemployment, income, and death rates and concluded that tribal communities were significantly worse off than non-tribal communities.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes

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The Yakama Nation Comments on

Bonneville Power Administration's Power Function Review

April 28, 2005

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Summary

The Yakama Nation is providing comments to BPA on the Power Function Review (PFR). This process is intended to determine the costs of BPA programs for the BPA rate case that will determine BPA revenues for Fiscal Years 2007 through 2009.

The Yakama Nation has been working with other fish and wildlife managers through a workgroup of the Columbia Basin Fish and Wildlife Authority to develop the costs to fully implement the Council Program and the Federal Columbia River Power System (FCRPS) Biological Opinions.

Working with CBFWA, we have developed the most detailed budgets ever prepared for this kind of effort. Those budgets clearly show that implementing the subbasin plans, wildlife program, and other ongoing activities will require a significant increase in BPA funding. That should not come as any surprise. Restoring the habitat in the Columbia Basin—an area the size of France—will require a major effort.

As these comments are due, the CBFWA report is going through consent review; it has been approved by the state fish and wildlife agencies in Idaho, Montana, Oregon, and Washington and all of the Columbia Basin Indian tribes, except the Coeur d'Alene and Kalispell tribe. It is our understanding that CBFWA is working with these tribes to address suggested changes.

The Yakama Nation endorses the CBFWA workgroup recommendation that BPA ramp up its funding during the next rate case from $186 million in FY 2006 to $240 million in FY 2009:

$186 million in FY 2006,
$200 million in FY 2007,
$225 million in FY 2008,
$240 million in FY 2009.

Benefits from fully implementing the Council Program: These funding levels will put BPA on a path to complete implementation of most of the Council's Program during the next ten years. This is an essential first step in meeting the Council's rebuilding goals for salmon and steelhead.

Implementing the subbasin plans would result in significant accomplishments:

- Protection for more than 48,000 acres of habitat;
- Improvements to more than 1300 miles of streams;
- Construction of almost 1600 miles of fence
- Enhancement activities on more than 75,000 acres of habitat;
- Correcting passage problems at more than 1200 diversions and culverts; and,
- Additions or major enhancements to fish production facilities in 11 subbasins.

An aggressive implementation schedule has the lowest biological risk. There are a number of listed species that are declining and at risk of extinction; improving habitat is critical for their survival. Implementing these actions quickly will save money in the long run. The costs of acquiring land or easements for riparian habitat are going up very fast in Eastern Washington.

The Council Fish and Wildlife Program and the FCRPS Biological Opinions rely heavily on improving habitat as off-site mitigation for the dams. These efforts are especially important to us. For at least the past four decades, the Columbia Basin Treaty tribes have voluntarily imposed severe restrictions on their treaty-reserved fisheries to assist in rebuilding wild populations of salmon and steelhead. This action was taken based on the expectation that other relevant parties would also take actions to share the burden of wild stock conservation. The tribes are still waiting for these actions, particularly in the area of habitat protection and improvement. Improving habitat is the only way to rebuild to sustainable, harvestable levels those wild runs that presently constrain treaty fisheries.

Implementing the subbasin plans will also provide thousand of jobs in rural and tribal communities in eastern Washington and Oregon and in Idaho and Montana. This is an important issue for us. In recent years, unemployment on our reservation was about 70 percent outside of the fishing season. We have worked very hard to bring that down to about 40 percent. Providing jobs to restore habitat and rebuilding our tribal fishery are really important to the Yakama Nation.

We are also ratepayers. The Yakama Nation is in the process of forming Yakama Power—a tribal utility that will buy power from BPA. We calculate that the increased costs of implementing the Program and ESA represents about $1 per month for the average residential consumer served by utilities that buy <u>all</u> of their power from BPA. The costs would be more for large energy users such as Yakama Forest Enterprise, our casino, Yakama Juice and other tribal enterprises. The impacts on customers served by utilities that don't buy all of their power from BPA would be smaller.

BPA's funding alternatives are inadequate: Our comments also address the funding alternatives that BPA has developed. First we would note that these alternatives appear to be ignore the costs developed by the CBFWA workgroup and therefore are not based on the best information available. We are also disappointed that BPA has not provided any comments to date on the CBFWA detailed cost report. We met with BPA and utility staffs over the last four months, shared drafts of the detailed report, and sought comments.

Under BPA's low alternative, it would take 70 years to implement the subbasin plans and other parts of the Council's Program. This is unacceptable to the Yakama Nation—it would mean the extinction of a number of salmon runs.

Under BPA's high case, at $174 million per year, it would take 40 years to implement the subbasin plans and other measures in the Council Program. This is also unacceptable and

does not come close to meeting the goals of the Columbia River Basin Fish and Wildlife Program.

BPA says that it is looking for clear objectives. The Council set a goal in the 2000 Fish and Wildlife Program to rebuild salmon and steelhead to five million fish returning above Bonneville Dam by 2025. The current runs are less than 2.5 million fish—about the same levels as when the Council originally set its goal in 1987.

Under BPA's high case, you won't implement the Council's current subbasin plans until 2045! BPA will not come close to meeting the Council goal.

Summary recommendations: Based on the detailed analysis conducted by the CBFWA workgroup, the Yakama Nation has developed a number of recommendation (see page 25); in summary:

1. BPA should incorporate the cost estimates and recommendations developed by the Columbia Basin Fish and Wildlife Authority into the next rate case. These are the best estimates available. A copy of the report and recommendations are incorporated as Attachment 1.

2. The CBFWA estimates are based on the assumption that BPA will use its borrowing authority for land and water acquisition. BPA should modify its capitalization policy to set up mechanisms to allow borrowing funds or the use of its borrowing authority to purchase land and water.

3. BPA must meet the goals of the Fish and Wildlife Program to rebuild salmon and steelhead returns above Bonneville Dam to five million by 2025. The funding recommended by the fish and wildlife managers through FY 2009 is not likely to exceed the Fish and Wildlife Program goal.

4. The Columbia Basin needs an Implementation Plan for fish and wildlife. We strongly recommend development of an implementation plan detailing the actions, schedule and costs needed to implement the Fish and Wildlife Program, and are committed to that effort.

5. Full implementation of the F&W Program and ESA activities will create economic benefits in tribal and rural areas.

6. BPA should address the fact that there are a number of events that could significantly increase fish and wildlife funding. For example:

    - The current lawsuit against the FCRPS biological opinion could result in higher costs.

    - CBFWA assumed that other Federal agencies will fund habitat restoration on federal land. Given the tight federal budget, these costs could fall on BPA.

- The BPA and Council have assumed that monitoring and evaluation costs will decrease. These assumptions are untested and the ESA may require more monitoring.

- NOAA fisheries Service has said recently that the recovery plans under the ESA may go well beyond the actions called for in the subbasin plans in the Council's Program. This would add to costs.

- When the currently favorable ocean conditions deteriorate, BPA may be called upon to fund additional activities to address weak-stock survival or productivity.

- The costs for hatchery reforms are not addressed in the BPA estimates.

- None of the estimates adequately address the effects of inflation. The fish and wildlife program has been flat funded for the last four year.

- During the last rate case, BPA promised the Yakama Nation that it would increase its rates if necessary to meet fish and wildlife costs. What BPA actually did was reduce fish and wildlife costs over the five year rate period and eliminated spill and flow protections in 2001.

7. BPA needs an effective cost recovery mechanism that will ensure that it makes adequate progress in meeting the Council's goal of five million returning salmon and steelhead by 2025.

The Yakama Nation wants to work with other fish and wildlife managers, the Council, and BPA to resolve these issues in the region. However, if BPA goes forward with its current alternatives, we will have no alternative but to nationalize the issue.

Introduction

In November of 2004, the Columbia Basin Fish and Wildlife Authority (CBFWA) formed a workgroup to develop fish and wildlife costs for the BPA rate case. The focus of this effort has been developing costs for the BPA Integrated Fish and Wildlife Program for the next rate case that incorporate the habitat and production measures in the subbasin plans. Based on the detailed analysis conducted by the CBFWA workgroup of the costs of implementing the Northwest Power and Conservation Council's Columbia Basin Fish and Wildlife Program pursuant to the Northwest Power Act and the Federal Columbia River Power System Biological Opinions pursuant to the Endangered Species Act, the Yakama Nation recommends that BPA increase its fish and wildlife funding for the Integrated Program to:

$186 million in FY 2006,
$200 million in FY 2007,
$225 million in FY 2008,
$240 million in FY 2009.

These budgets assume that BPA will use its borrowing authority to capitalize production facilities and land and water acquisitions for habitat measures. These amounts would put BPA on a path to implement most of the subbasin plans that have been included in the NPCC Fish and Wildlife Program within ten years.

To size the overall level of effort needed to implement the subbasin plans, the CBFWA workgroup developed detailed estimates of the cost to implement the subbasin plans. These costs total $1.8 billion. The CBFWA workgroup also identified additional wildlife mitigation costs totaling $300 million. The current budgets provide sufficient detail to size the effort. The costs will be refined through Council Program amendments and the project selection process.

Implementing most of the work in the subbasin plans and the wildlife actions, and the other parts of the Integrated BPA Fish and Wildlife Program would average $240 million per year. If BPA decides that it will not capitalize the cost of land and water acquisitions, then the average cost would be $310 million per year.

The workgroup also found that the work envisioned by the subbasin plans does not address all of the habitat protection and enhancement activities that are likely to be needed to meet regional fish and wildlife goals. Therefore, we recommend that federal, state, and tribal governments immediately begin to develop a comprehensive plan to protect, mitigate, and enhance fish and wildlife in the Columbia Basin. This process should address funding from BPA and other sources. It should include biological analysis to determine whether the actions are likely to achieve the fish and wildlife goals and obligations under the Endangered Species Act, Northwest Power Act, and treaty and trust responsibilities. This effort should result in a detailed workplan and budget for future fish and wildlife activities in the Columbia Basin.

The Yakama Nation recommends that federal, state, and tribal governments work to develop biological analysis of the expected results from the subbasin plans and to monitor those results. The Council has set a goal for the Fish and Wildlife Program of five million salmon and steelhead returning above Bonneville Dam by 2025. This biological analysis would help determine whether the actions in the current Fish and Wildlife Program would exceed this goal. The Council has also set goals to address the wildlife loses associated with the construction of the dams and inundation of the reservoirs.

Background

The Yakama Nation's interest in the BPA PFR and rate case

The Yakama Nation is the largest Indian tribe in the Northwest. We are also the largest employer in Central Washington, with over 4.600 jobs in our tribal government and tribal enterprises.

The Yakama Nation also has the largest number of tribal fishermen on the Columbia River. The Nation signed a Treaty with the United States in 1855 that guaranteed our rights to fish and hunt to support our culture, religion, and tribal economy. The loss of salmon has had a devastating effect on the Yakama Nation.

Over the last forty years the United States and several of the Northwest states have asked the Yakama Nation and other tribes with similar treaties to reduce our tribal harvest as part of an effort to rebuild salmon runs. These governments promised to restore salmon habitat to rebuild health salmon runs.

We voluntarily stopped our commercial harvest of spring chinook in 1965 and summer chinook in 1975. More recently, our salmon harvest has been further constrained to protect salmon listed under the Endangered Species Act. The Federal government developed a biological opinion that left the dams in place and promised aggressive efforts to restore habitat. We had a couple of good years recently where there was some commercial harvest on spring and summer chinook, but this year is looking very tough.

We have a lot of promises from the Federal government and the states, but very little action that has improve habitat or migration survival.

That is why the Yakama Nation was a party in the last BPA rate case. We spent considerable resources trying to convince BPA to include sufficient funding to fully implement the Council's Fish and Wildlife Program and the Biological Opinion.

We were not very successful in that rate case and we are currently suing BPA in the Ninth Circuit. We believe BPA violated the Northwest Power Act because its rates were not sufficient to meet its costs, including fish and wildlife costs, and assure repayment to the Treasury as required by the Act. That case is pending.

Now BPA is starting a new rate case. We need to ensure that BPA provides adequate funding to implement the Council's Program, the ESA, and fulfill it treaty and trust obligations to our tribe.

BPA's Role in Fish and Wildlife Funding

BPA funds a significant portion of the fish and wildlife restoration work in the Columbia Basin. Since 1981, BPA's total fish and wildlife funding has averaged $132 million per year. During Fiscal Years 2002 through FY 2006, BPA projected that these costs would average $255 million per year.

Under the Northwest Power Act, BPA funds measures to protect, mitigate, and enhance fish and wildlife damaged by the hydroelectric development and operations in the Columbia River Basin[1]. These costs are part of Bonneville's total system costs.

The revenues for fish and wildlife and other BPA functions come from the sale of electricity from the Federal Columbia River Power System (FCRPS). This system includes the federal dams in the Columbia Basin, one nuclear power plant, and other small generating resources that have been acquired by BPA. As part of the process for setting rates, BPA must project its future costs and future sales of electricity. It also must address the uncertainties associated with these projections to ensure that its rates are sufficient to meet its costs and repay the U.S. Treasury for the money BPA borrowed to build the dams, transmission system, and other capital investments.

History of BPA Fish and Wildlife Funding

In 1995, the Departments of the Army, Commerce, Energy and Interior entered into a MOA for fish and wildlife funding for FY 1996 through FY 2001. The MOA was not renewed; however, BPA has continued divide its fish and wildlife funding into categories established by the MOA. This section summaries the capital, reimbursable, and direct budgets and the recent funding history. BPA now refers to the direct budget as the integrated fish and wildlife budget. Table 1 in Appendix 2 shows the total funding for these categories from 1996 to 2003, that information is summarized in Figure 1 below.

[1] 16 U.S.C. 839b(h)(8), 839b(h)(10).

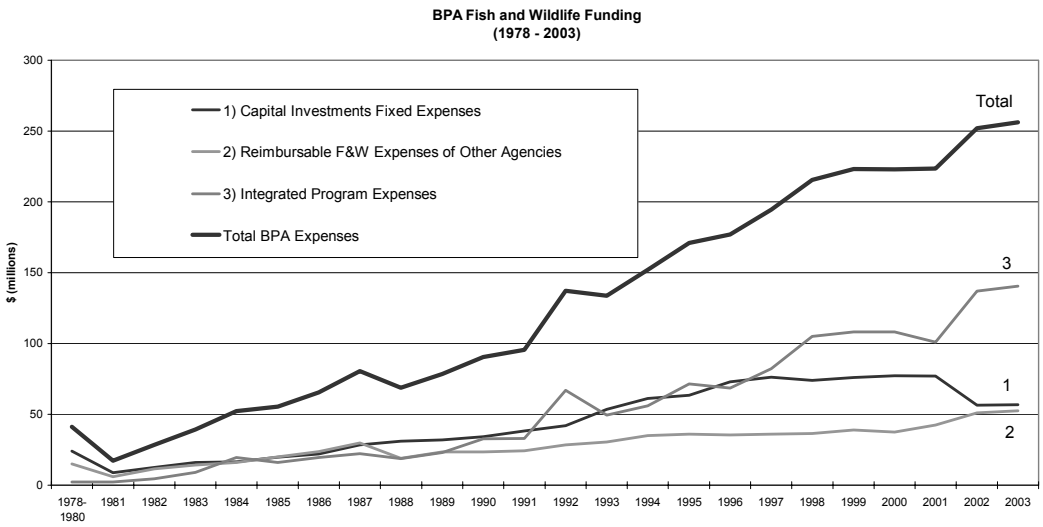


Figure 1: Total BPA Fish and Wildlife Funding

The Capital Budget: BPA repays the U.S. Treasury amortization, depreciation, and interest on capital investments in fish facilities at dams built and operated by the Corps of Engineers and Bureau of Reclamation. BPA's capital budget also repays funds borrowed to construct numerous hatcheries built as partial mitigation for the FCRPS. Other investments include salmon transport barges and improvements at the FCRPS dams for fish collection, passage and, as well as planning, design, monitoring and research studies. The amounts for each of the major funding categories, including the amount that Congress authorized the COE and BOR to borrow each year is shown in Figure 1.

The costs for capital investments have remained fairly steady since the adoption of the 1996-2001 Memorandum of Agreement. The MOA set targets for capital investment of $107 million annual average. BPA's investments in this area under-ran the targets significantly, averaging $76 million annually, for a total under-investment of more than $188 million. For the past eight years, the annual appropriation for fixes at mainstem dams has averaged approximately $83.5 million. Since the adoption of the 2000 Biological Opinions, average annual spending has remained fairly constant with only a slight decrease.

In 1985, BPA began capitalizing projects in the Integrated (Direct) Fish and Wildlife Program. The 1996-2001 MOA set $27 million as the annual target for capitalized projects in the Integrated Program. The line "Integrated Program" under Capital Investments in Table 1 in Appendix 2 shows the trend in this amount. Under the MOA, BPA capitalized an average of $20.2 million annually, under-spending the target by about $40.8 million over the term of the MOA (see Figure 2).

It is important to note that the amount borrowed is different than the annual repayment costs that drive BPA's revenue requirements. The amount borrowed is usually booked in the year construction starts, while repayment does not start until the facility is completed.

As a general "rule of thumb," the annual repayment costs are about one-tenth of the amount capitalized or borrowed.

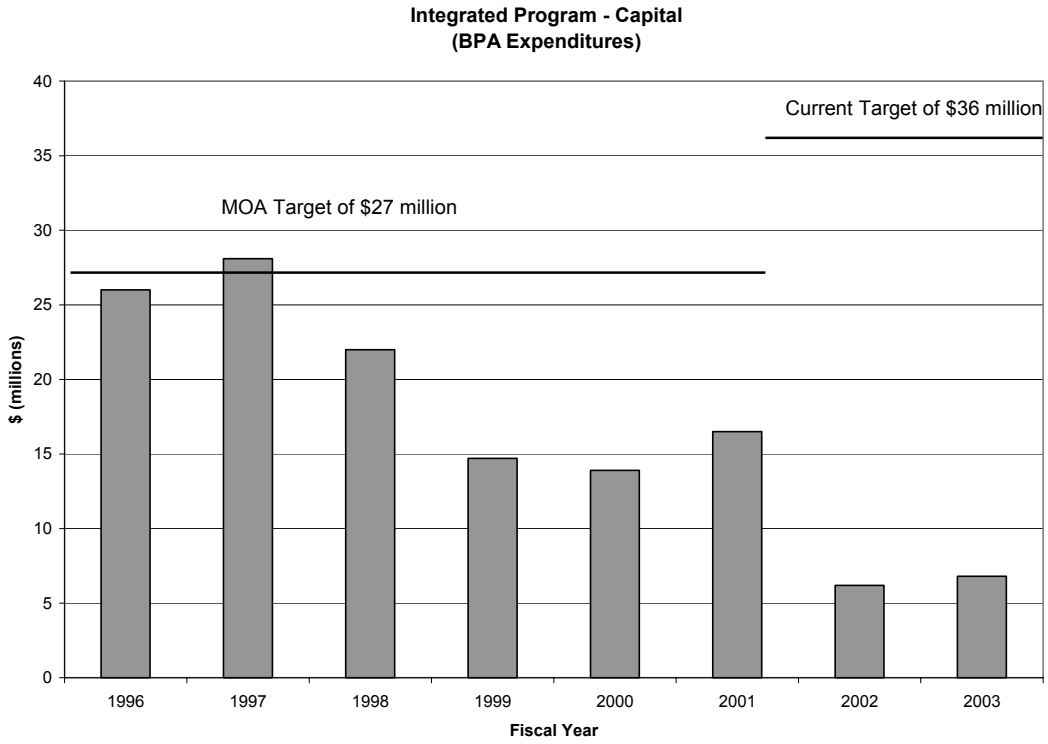


Figure 2. Actual capital investments in the Integrated program from 1996-2003.

Reimbursed Expenses of Other Agencies: BPA repays the U.S. Treasury for the hydroelectric share of operation and maintenance budgets and other authorized non-capital expenditures for fish and wildlife activities by the U.S. Corps of Engineers (COE), U.S. Bureau of Reclamation (BOR) and U.S. Fish and Wildlife Service. These costs include the Lower Snake River Compensation Plan implementation and numerous hatcheries built to mitigate for FCRPS. BPA also funds half of the Northwest Power and Conservation Council's budget (currently $4.5 million annually) under this portion of its budget.

This category of the budget averaged $37.8 million annual under the MOA, close to the MOA annual budget target of $40 million. The operation and maintenance budgets have increased by more than one-third since the end of the MOA. Most of the increase appears to be related to an increase in COE and BOR budgets (Figure 3 and Table 1 Appendix 2).

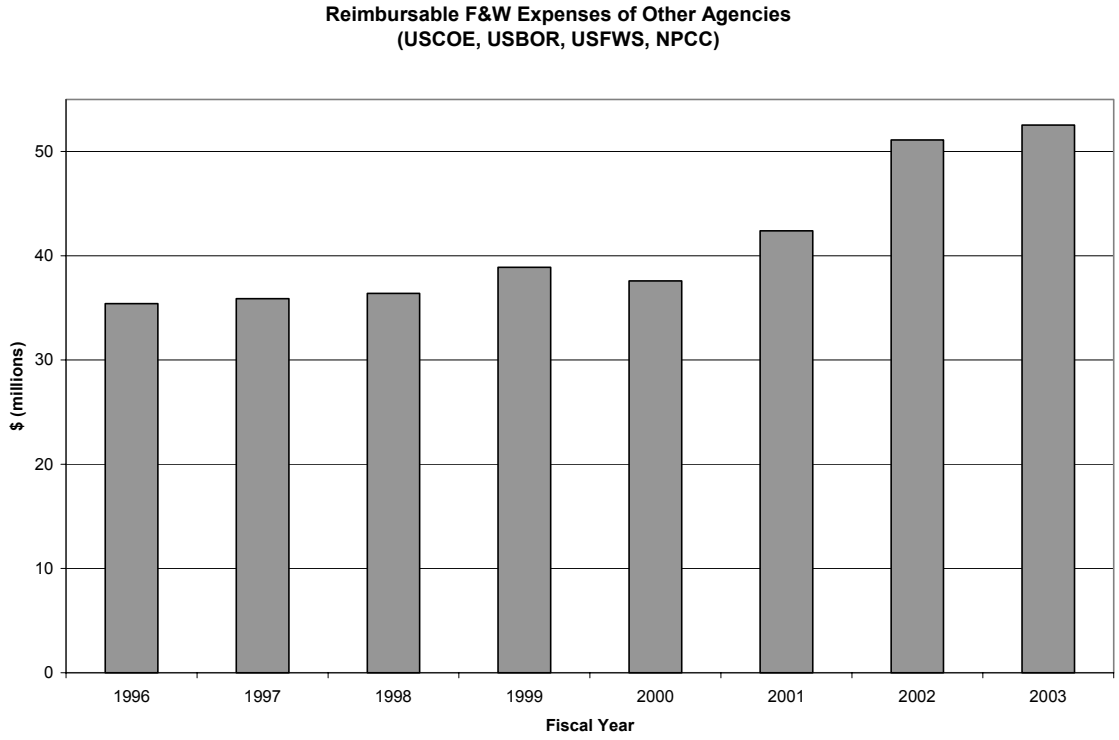


Figure 3. Reimbursable fish and wildlife expenses of other federal agencies.

Integrated (Direct) Program: The Integrated Program budget has two categories: Capital (discussed above) and Expense. The Expense portion of the Integrated Program has increased steadily since 1978. The MOA set an annual budget target of $100 million, with BPA spending averaging $95.5 million annually, a shortfall of $26.9 million over the term of the MOA. During the current rate case (FY 2002 through FY 2006), the target for the Expense portion of the Integrated Program was set at $150 million and reduced to $139 million annually in 2003. Actual spending during the current rate period has averaged $139 million per year.

Although this appears to be an increase in funding of $39 million annually since the MOA, the program funding had not been adjusted for inflation for eight years. Further, BPA has rolled contracted obligations forward each year without shifting the associated funding, creating a "bow-wave" of unfunded obligations. A change in accounting practices in FY 2003 required elimination of $40 million worth of these carry-over obligations. In essence, BPA cut $40 million in obligations from the Integrated Program in FY 2003. BPA is now considering cutting an additional $15 million from the Integrated Program over the period 2005-2006.

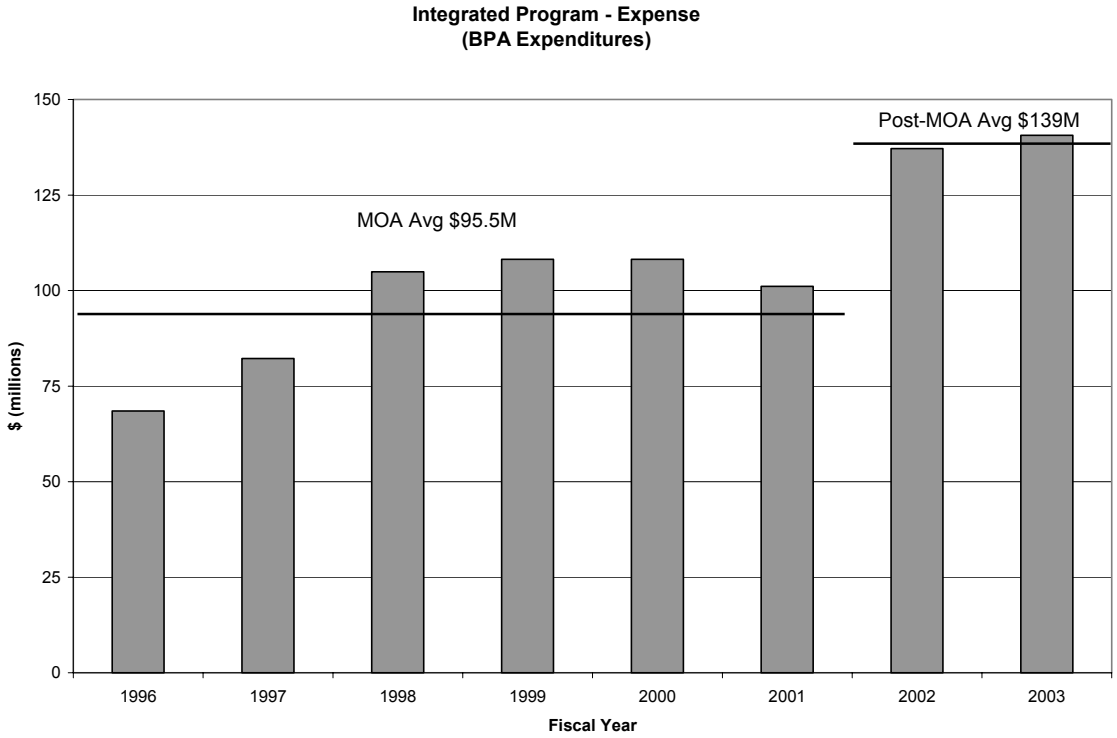


Figure 4. BPA spending in the Integrated Program from 1996-2004.

The 2002 BPA Rate Case

Power and Fish and Wildlife Decisions

BPA began its last rate case process in 1999, before decisions were made on the measures that would be included in the 2000 Biological Opinion for the FCRPS. These rate decisions addressed BPA's revenues for FY 2002 through FY 2006. Fish and wildlife managers raised concerns that BPA's rate case decisions could foreclose fish and wildlife decisions, including the implementation of the Biological Opinion and Council Program by limiting funding. Federal, state, and tribal governments worked to develop 13 alternatives for future fish and wildlife funding through 2011; the costs for these alternatives averaged $438 to $721 million per year. BPA assured the fish and wildlife managers that it would "keep the options open" by including the range of costs in its rates. BPA also committed that it would adjust its rates, if necessary, to accommodate future funding needs.

Problems with 2002 Rate Case Process

BPA states that it gave equal weight to the 13 alternatives in setting its rates and assumed an average for the direct program of $139 million per year. In the initial rate proposal, BPA stated that these assumptions would not limit actual funding.

The Columbia River Inter-Tribal Fish Commission and the Yakama Nation were parties to the rate case. We raised concerns that BPA's methodology had actually assumed a one per cent probability that costs would be at the high end of the range. We also raised concerns that BPA had changed the methodology in calculating direct fish and wildlife costs. Rather than weighting 12 of the alternatives at $179 million per year and one alternative at $100 million, consistent with the alternatives developed by the Federal, state, and tribal process and arriving at an equally weighted estimate of $173 million per year, BPA averaged the high and low alternatives and assumed $139 million per year. This assumption lowered the direct costs by $170 million during the rate period. BPA did not dispute any of the CRITFC and Yakama contentions in the rate case.

BPA finalized its rates in 2001, and then immediately reopened its rate process to address higher costs associated with supplying power to its customers. BPA had committed to serve 3,300 megawatts of power beyond its available resources. When the manipulation of the California electricity markets caused prices to soar, BPA estimated that the cost of serving these additional commitments was $3.9 billion during the current rate period. These added costs were included as part of a Cost Recovery Adjustment Clause known as the load-based and financial-based CRACs.

In 2003, BPA faced additional costs associated with its own operations, the operations of the federal dams and the nuclear plant. As a result, BPA conducted a Safety Net Cost Recovery Adjustment Clause (SN-CRAC) process to address these additional costs. During that process, CBFWA provide analysis that the cost of implementing the Provincial Review would add $100 million per year above BPA's current fish and wildlife funding. The Review was conducted by CBFWA and the NPCC and based on measures that had gone through the project review process and been approved by the Independent Science Review Panel. BPA did not address these additional fish and wildlife costs as part of the SN-CRAC. BPA has subsequently set a cap on the direct fish and wildlife program of $139 million. In 2001, BPA and the Corps of Engineers eliminated fishery spill and flow provisions to ensure BPA's ability to make its payment to the U.S. Treasury.

Developing Fish and Wildlife Costs for the Next BPA Rate Case

Coordinating Power and Fish and Wildlife Decision Processes

Given the problems of the 2002 rate case, fish and wildlife managers began discussions in 2003 on ways to coordinate the next BPA rate case with fish and wildlife decisions. They wanted to ensure that BPA decisions regarding its revenues after 2006 would not foreclose fish and wildlife recovery under the Northwest Power Act or the Endangered Species Act. It appeared that the Subbasin Planning Process being conducted by the NPCC and BPA could provide the information needed for the next rate case.

The NPCC's 2000 Program included a framework for fish and wildlife in the Columbia Basin and called for the development of subbasin plans that would include subbasin assessments, an inventory of existing activities, and a management plan. The

management plan was required to have a vision, biological objectives for fish and wildlife, strategies that will be employed to meet the vision and biological objectives, a projected budget (including both a three-year implementation budget and more general 10-15 year budget), a monitoring and evaluation plan, and additional steps necessary to comply with the Endangered Species Act and the Clean Water Act[2].

NOAA Fisheries had indicated that it could use these subbasin plans as the basis for recovery plans under the Endangered Species Act. Therefore, it appeared that these subbasin plans, scheduled for completion by May 2004, could provide detailed budgets for the BPA rate case that would begin in early 2005.

Unfortunately, most of the subbasin plans did not include budgets. To further complicate things NOAA Fisheries is working to develop recovery plans under the ESA; however, final adoption of all of the subbasin and the NOAA recovery plans will not be completed prior the initiation of the BPA rate case.

The Biological Opinion for the FCRPS also creates uncertainty for future fish and wildlife funding. CBFWA estimates that 75 percent of BPA's fish and wildlife funding goes to implement the Biological Opinion. NOAA Fisheries adopted a new Biological opinion on November 30, 2004. Several parties have filed law suits against the new Biological Opinion; the briefing schedule for this case could result in a decision in the spring of 2005.

BPA and the Council began meeting in the fall of 2004 to review the major budget categories and identify the factors that may increase or decrease costs in the future. In November of 2004, CBFWA formed a workgroup to coordinate the development of fish and wildlife costs for the next BPA rate case. The workgroup reported to the Members Management Group in December and made the following recommendations:

1. The fish and wildlife managers should review the assumptions made by the Council and BPA about future fish and wildlife costs.
2. The fish and wildlife managers should prepare fish and wildlife costs based on the subbasin plans. The primary focus of this work would be in the areas of habitat and production.
3. The fish and wildlife managers should work with BPA to design ways to provide flexibility to adjust fish and wildlife funding as information on the Biological Opinion, subbasin plans and recovery plans becomes available to ensure that BPA can fully implement these important plans.

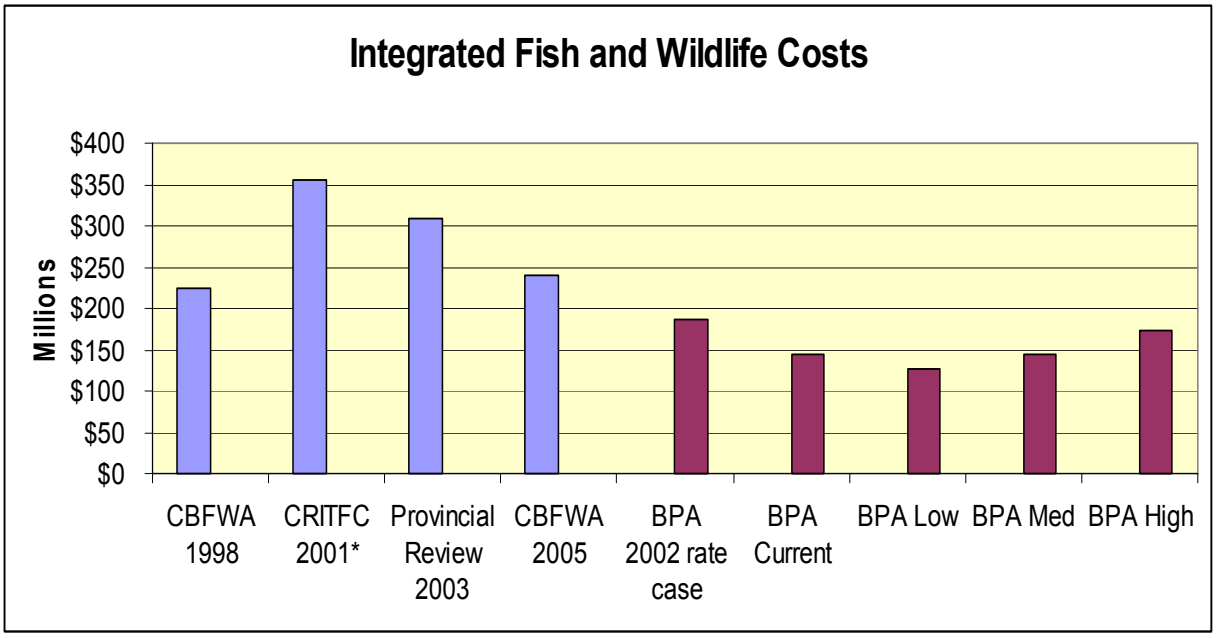
Previous Fish and Wildlife Cost Estimates

CBFWA has developed two previous fish and wildlife cost estimates. The first was in 1998 as part of the Multi-Year Implementation Plan. This effort developed costs for implementing all of the elements of the Council Program and FCRPS Biological Opinion. The annual costs were $200 to $225 million.

[2] See Columbia River Basin Fish and Wildlife Program, document 2000-19, pages 39-41.

In 2003, CBFWA and the Council conducted the Provincial Review to determine the costs of implementing projects that had been approved by the fish and wildlife managers, the Council, and the Independent Science Review Panel. The Provincial Review identified BPA revenue requirements (capital, reimbursable costs, and direct program) of $310 million per year for FY 2003 through FY 2006.

CRITFC, the Oregon NPCC office, and the Yakama Nation also developed estimates of the costs of implementing the 2000 FCRPS Biological Opinion and NPCC Program in January of 2001. This estimate was based on more aggressive habitat restoration activities to implement the "Aggressive Non-Breach Alternative" in the Biological Opinion and had an annual cost of $356 million. This figure assumed that all of the costs would be expensed; if CRITFC had assumed that some of the costs would be capitalized, the estimate would be similar to the recent CBFWA costs. The tribes consulted with other fish and wildlife managers on these estimates and sought comments from BPA, and utilities.



Analysis

The Importance of Habitat Restoration

The Council Fish and Wildlife Program and the FCRPS Biological Opinions rely heavily on improving habitat as off-site mitigation for the dams. These efforts are especially important for the Columbia Basin Treaty tribes. For at least the past four decades, the tribes have voluntarily imposed severe restrictions on their treaty-reserved fisheries to assist in rebuilding wild populations of salmon and steelhead. This action was taken

based on the expectation that other relevant parties would also take actions to share the burden of wild stock conservation. The tribes are still waiting for these actions, particularly in the area of habitat protection and improvement. Improving habitat is the only way to rebuild to sustainable, harvestable levels those wild runs that presently constrain treaty fisheries.

The Yakama Nation has been waiting a long time for the United States to fulfill this commitment in our Treaty. The federal government has repeatedly asked us to reduce our harvest and promised to restore habitat to promote long-term rebuilding of salmon runs. The failure by the United States to exercise all of its authorities and powers to improve wild salmon runs has deprived the Columbia River treaty tribes of vast numbers of harvestable salmon that were guaranteed by the federal government in the treaties of 1855. It is time for the United States to start living up to this commitment.

Implementing the subbasin plans in the Council Program would provide protection for more than 48,000 acres of habitat; improvements to more than 1,300 miles of streams; enhancement activities on more than 75,000 acres of habitat; and, correcting passage problems at more than 1,200 diversions and culverts.

An aggressive implementation schedule has the lowest biological risk. There are a number of listed species that are declining and at risk of extinction; improving habitat is critical for their survival. Implementing these actions quickly will save money in the long run. The costs of acquiring land or easements for riparian habitat are going up very fast in Eastern Washington. These efforts will also provide thousands of jobs in rural and tribal communities.

BPA Alternatives

BPA has developed three alternatives for funding levels for the integrated fish and wildlife budget for FY 2007 through FY 2009. A forth alternative would defer the funding level until there is more regional discussion. BPA's low, medium, and high case are not based on the CBFWA analysis of the cost of implementing the NPCC Program and the Biological Opinions. These three alternatives will not meet the goal of the NPCC Program. The low, medium, and high alternatives increase the risk of extinction for salmon and steelhead listed under the ESA.

Low Case: This option reduces funding levels to support ESA driven priorities while meeting only minimum Power Act requirements except for those ESA mitigation projects that also have benefits to non-ESA listed anadromous, resident fish and wildlife species. This alternative assumes annual costs of $126 million per year—$19 million less than the current level of $145 million. Adjusting for inflation this alternative would be $47 million less than the current level. This alternative assumes very low funding for new habitat and production work. This alternative would take approximately 49 years to implement the subbasin plans in the NPCC program assuming BPA changes its policy and capitalizes land and water acquisition costs, it also assumes no inflation. Under BPA's current capitalization policy, this funding level would not implement the habitat

work in the subbasin plans for 71 years; of course inflation would extent implementation even further.

2. Medium Case: This option is slightly greater than Integrated Program in the current rate case to meet subbasin plan and BiOp requirements through redirecting of some RM&E and IMCA funds to on the ground actions. This alternative assumes annual costs of $144 million per year—about the same as the current level. Adjusting for inflation this alternative would be $29 million less than the current level. This alternative assumes $46 million per year for funding for new habitat and production work. Under BPA's current capitalization policy, this funding level would not implement the subbasin plans for 46 years assuming no inflation. This alternative would take approximately 32 years to implement the subbasin plans in the NPCC program assuming BPA capitalized land and water acquisition costs and no inflation.

3. High Case: Option greater than that for the Program in the current rate case and provides additional funding to cover new BiOp and Subbasin Plan requirements. This alternative assumes annual costs of $174 million per year—$29 million more than the current level. Adjusting for inflation this alternative would be about the same as the current level. This alternative assumes $52 million per year for funding for new habitat and production work. Under BPA's current capitalization policy, this funding level would not implement the subbasin plans for 40 years; again, assuming no inflation. This alternative would take approximately 28 years to implement the subbasin plans in the NPCC program assuming BPA changes its current policy and uses its borrowing authority to capitalize land and water acquisition costs, it also assumes no inflation.

4. **Rationale Only/Costs TBD:** In describing this alternative BPA states: "May be the best incentive for regional parties to take more time to collaborate in discussions leading to a new Program level based upon clear priorities and objectives that the region can support. This may push Program funding level discussions into the same time frame as the formal Rate Case (i.e., fall 2005)."

Comparison to NPCC Program goal: The 2000 Columbia Basin Fish and Wildlife Program sets a goal to increase salmon and steelhead populations above Bonneville Dam to five million returning adults by 2025. BPA's low, medium, and high alternatives would not come close to meeting this goal.

Yakama Nation Recommendation: BPA should adopt the funding level in the CBFWA workgroup cost report of $186 million in FY 2006, $200 million in FY 2007, $225 million in FY 2008, and $240 million in FY 2009. This funding level would put the region on a path to implement the subbasin plans in about ten years. This pace of implementation would have much lower biological risk to listed species and offers some hope of progress on restoring the treaty fisheries of the Columbia Basin Indian tribes.

The region's goal should be to minimize biological risk to species in the Columbia River Basin; therefore, BPA should implement actions to provide the habitat conditions that these species need to survive as soon as possible. The majority of the ESUs listed under

the ESA have lambdas that are less than 1.0; that means these populations are not replacing themselves and will continue to decline toward extinction.

The costs of acquiring or leasing land and water to protect and enhance habitat will continue to increase as human population grows. We project that these costs will increase significantly faster than inflation, especially the acquisition of land in riparian areas to protect habitat.

Therefore, we conclude that a ten-year implementation schedule for the subbasin plans has the lowest biological risk and the lowest long-term costs. We also note that implementation of the subbasin plans represents a small portion of the habitat protection and enhancements needs in the Basin. The CBFWA workgroup did a course grain analysis of the total habitat work needed to protect and enhance habitat and found that this effort would be significantly larger than the work identified in the subbasin plans. Completing the subbasin plans as quickly as possible will provide a good start to the long-term habitat work that is likely to be needed to meet our goals.

BPA's low, medium, and high alternatives are unacceptable. If BPA is not prepared to adopt the CBFWA workgroup analysis, it should take more time on this issue.

BPA Assumptions

BPA's Low alternative assumes a five percent reduction in RM&E, Production, Mainstem, and Habitat through improved efficiencies. This is unlikely to occur because there is no mechanism or criteria to further reduce the existing programs. The years of flat funding have forced significant improvements in efficiencies. In many cases, further reductions in individual programs will reduce on-the-ground work.

The fish and wildlife managers support the concept of putting a higher percentage of the funding on-the-ground. BPA has proposed that 70 percent of the funding go to on-the-ground projects, 25 percent to research, monitoring and evaluation, and five percent to coordination activities. This allocation will be difficult to reach without either: making difficult cuts to specific programs or eliminating them: or, increasing funding for on-the-ground activities. The CBFWA workgroup budget would put 80 percent of the funds on-the-ground.

BPA proposes cutting Information Management, Coordination, and Administration costs from about $10 million/year to about $6 million per year in the Low and Medium scenarios. This assumption appears to be unrealistic when we examine the current funding levels under this category. Currently StreamNet has a budget of $2.4 million. The PIT tag info system has a budget of $2.1 million. CBFWA has a budget of $1.7 million. The Fish Passage Center's budget is $1.3 million. The ISRP budget is $1.1 million. Together, these activities account for $9.7 million. Cutting 60 percent of these activities is not realistic.

The 10-year implementation of the production activities proposed in the subbasin plans will cost at least an additional $290 million. BPA's High scenario would provide about $12 million annually for new initiatives and at that rate (assuming no new O&M or M&E costs) it would take at least 20 years to accomplish.

The analysis of budget "drivers" in is based on several assumptions about the ability to reallocate current program expenditures and reduce the need for future budget requirements. These assumptions are untested. For example, BPA assumes that current project-scale monitoring and evaluation will be reduced to make funds available to conduct increased programmatic monitoring and evaluation. How this will be accomplished is unclear, consequently any savings are uncertain.

NOAA Fisheries staff has indicated on several occasions that implementing the subbasin plans may not address all of the activities in the forthcoming recovery plans. Therefore, the costs could be higher than the CBFWA estimates and much higher than the BPA funding alternatives.

Pending litigation on the current FCRPS Biological Opinions may result in significant changes in required fish and wildlife activities, and may increase costs or affect revenues.

Implementation of the "Mainstem Amendment" to the NPCC Fish and Wildlife Program may increase costs or affect revenues.

When the currently favorable ocean conditions deteriorate, BPA may be called upon to fund additional activities to address weak-stock survival or productivity.

The NPCC Artificial Production Review and Evaluation and the NOAA Fisheries Hatchery Genetic Management Plans call for changes in the operation of many hatcheries built as mitigation for the hydropower system. These costs are not presently reflected in the BPA draft costs for the upcoming rate case and costs for the Reimbursable and the Integrated Program budgets may increase.

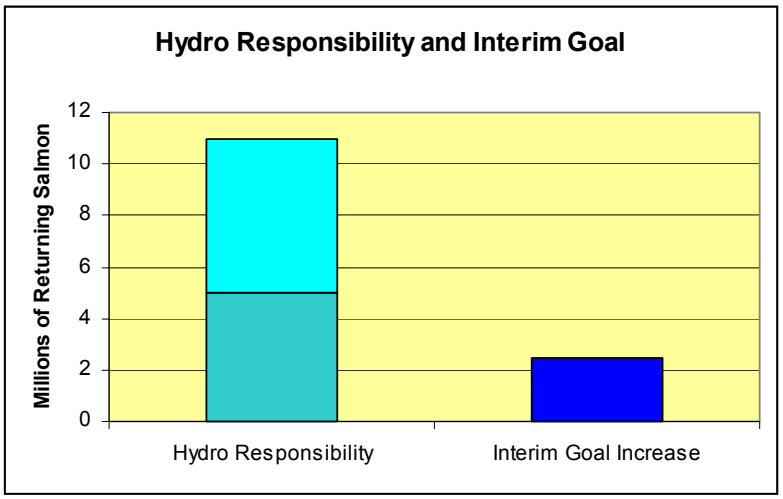
Inflation, especially increased costs for acquiring habitat and water, is not adequately addressed in the BPA alternatives. A three percent inflation rate will result in a $25 million increase in annual budget needs by the end of the rate period in FY 2009.

BPA Responsibility

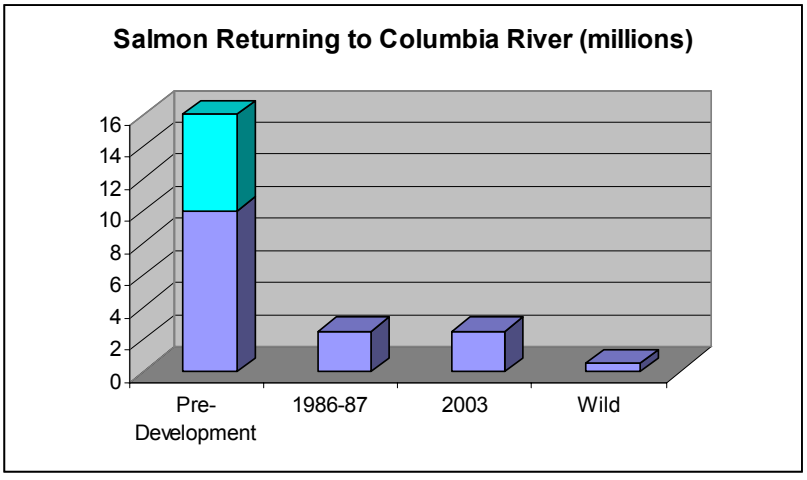
In the mid 1980s, the Northwest Power Planning Council (now called the NPCC) conducted an exhaustive study of the historical size and current status of salmon and steelhead populations. The Council also made policy decisions on what share of the losses were the responsibility of the hydroelectric system. The Council also set a goal for the Fish and Wildlife Program. BPA is the only Federal agency with statutory responsibility under the Northwest Power Act for funding the off-site measures to implement the NPCC Program.

The study examined all of the historical information on salmon runs and concluded that ten to fourteen million salmon and steelhead used to return to the mouth of the Columbia River every year. In 1986, about two and a half million fish were returning to the Columbia, five hundred thousand were naturally spawning fish—eighty percent of the runs came from hatcheries.

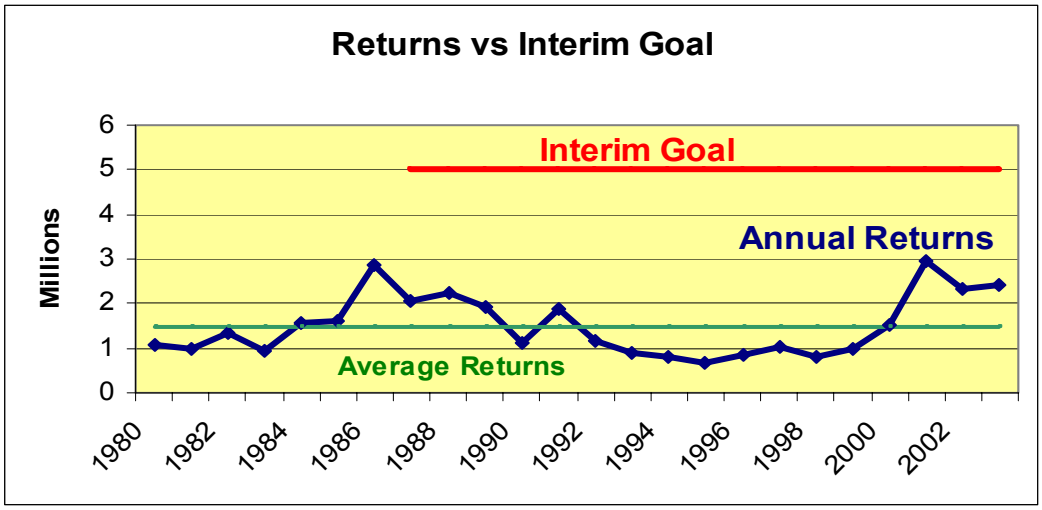
The study concluded that salmon and steelhead populations had declined by seven to fourteen million and that natural salmon runs were less than five percent of historical levels. The Council concluded that the dams were responsible for five to eleven million of the fish losses. As part of the rationale for the conclusion, the study found that about four million fish had used the habitat that had been blocked by the dams and that the operations of the dams accounted for the loss of another four million salmon. The Council set an interim goal of "doubling the runs"—increasing populations from two-and-a-half to five million salmon and steelhead. The Council said it would reevaluate a higher goal once the interim target was achieved.



The total returns in 2003 were about two and a half million salmon and steelhead—the same as 1986. About eighty percent of these fish came from hatcheries.



To put things in further perspective, 1986—the base year for the goal—was a good year for salmon. Many populations actually declined in the 1990—the average during the past twenty years was 1.5 million fish. So with conditions in the Pacific Ocean providing excellent feeding conditions for Columbia Basin salmon, we have seen the total salmon runs return to about where they where twenty years ago and wild stocks continue to decline.



The Yakama Nation viewed the Program's 1987 doubling goal as a compromise that would allow BPA to focus on an achievable interim goal and leave BPA's ultimate responsibility to a future decision process.

In the NPCC 2000 Program the goal was revised. The 2000 goal is to increase returning salmon and steelhead to five million adults returning above Bonneville Dam by 2025[3]. Under the Northwest Power Act, BPA must use its fund consistent with the Council Program. BPA, the Corps of Engineers, the Bureau of Reclamation, and the Federal Energy Regulatory Commission must also take the Program into account at each relevant stage of decision making to the maximum extent practicable.

The NPCC Fish and Wildlife Program relies heavily on off-site habitat and production strategies to partially offset the mortality associated with mainstem passage and the loss of habitat caused by the dams. BPA is the only Federal agency with authority to fund these off-site mitigation activities under the Northwest Power Act.

The CBFWA workgroup could not determine whether full implementation of the subbasin plans would result in an increase in returns to five million salmon and steelhead. Some of the plans do not include biological analysis. Fish and wildlife managers and the Council are currently working to revise some of the subbasin plans and to aggregate the expected biological results from implementation of the plan.

[3] See page 17 of the 2000 Columbia River Basin Fish and Wildlife Program

The Yakama Nation believes that it is unlikely that the funding levels recommended in the CBFWA workgroup report would result in salmon and steelhead returns that exceed the Council's goal by 2009. Therefore, these funding levels will not exceed BPA's responsibilities under the Program.

BPA has argued that it is not responsible for all of the activities in the subbasin plans. We believe that under the Northwest Power Act, BPA is responsible for implementing the off-site actions necessary to achieve the NPCC Program goal. There are no other Federal agencies that have this responsibility.

BPA's position appears to be an attempt to shift its clear legal responsibilities under the Northwest Power Act to state and local governments and private landowners. Does BPA believe that state and local governments should fund habitat programs or impose regulations to address the losses associated with the hydroelectric system? Does BPA advocate that landowners fund the habitat restoration activities needed to offset the damage caused by the dams? These are the logical consequences of BPA position. BPA should clearly state these consequences of its position and be prepared for the negative comments it will receive.

We would note for the record that the CBFWA budget for the subbasin plans do not assume BPA funding for actions on federal lands; Federal land managers, not BPA are assumed to implement these actions.

The Yakama Nation recommends that implementation of the subbasin plans precede with funding from BPA. If subsequent analysis or monitoring indicates that fish and wildlife populations are likely to exceed the goal for the Fish and Wildlife Program established by the Council, then the Council should initiate a rulemaking to address this issue.

Clear Objectives

BPA and regional utilities have repeatedly said that they want clear objectives for BPA's fish and wildlife activities. The NPCC Program provides a very clear goal: five million salmon and steelhead returning above Bonneville Dam by 2025.

The ultimate goal for the Federal government should be to address the requirements of the Endangered Species Act, the Northwest Power Act, and the Treaties, Executive Orders, and other commitments made to Indian tribes in the Columbia Basin. In the case of salmon and steelhead, we seek to implement the dual goals of recovery and delisting of salmonids listed under provisions of the ESA and the restoration of salmon populations, over time, to levels that provide a sustainable harvest sufficient to allow for a meaningful exercise of tribal fishing rights.

The Columbia River Basin Fish and Wildlife Program states:

> The vision for this program is a Columbia River ecosystem that sustains an abundant, productive, and diverse community of fish and

> wildlife, mitigating across the basin for the adverse effects to fish and wildlife caused by the development and operation of the hydrosystem and providing the benefits from fish and wildlife valued by the people of the region. This ecosystem provides abundant opportunities for tribal trust and treaty right harvest and for non-tribal harvest and the conditions that allow for the recovery of the fish and wildlife affected by the operation of the hydrosystem and listed under the Endangered Species Act.
>
> Wherever feasible, this program will be accomplished by protecting and restoring the natural ecological functions, habitats, and biological diversity of the Columbia River Basin. In those places where this is not feasible, other methods that are compatible with naturally reproducing fish and wildlife populations will be used. Where impacts have irrevocably changed the ecosystem, the program will protect and enhance the habitat and species assemblages compatible with the altered ecosystem. Actions taken under this program must be cost-effective and consistent with an adequate, efficient, economical and reliable electrical power supply[4].

The Program also established a number of scientific principles[5], biological objectives[6], and strategies[7] to guide fish and wildlife restoration.

The subbasin plans include biological objectives and identify limiting factors and strategies to achieve the objectives. The Yakama Nation has been working with BPA, the NPCC, and other fish and wildlife managers to integrate the subbasin plans into a coordinated plan for the Columbia Basin. This work needs to coordinate the efforts under the NPCC Program and the NOAA Fisheries Service recovery plans.

The Yakama Nation recommends that federal, state, and tribal governments immediately begin an effort to integrate subbasin and recovery planning. This work should include:

- Coordination of planning and analysis to address the biological objectives in the recovery plans and the Council's Program.
- Biological analysis of the expected results of the actions in achieving goals and biological objectives.
- A roll-up of all the plans to determine the expected contribution toward the NPCC goal and revision of the plans if necessary.
- Development of a detailed three-year workplan and budget for implementing a basin-wide fish and wildlife plan that integrates the NPCC Program and the FCRPS Biological Opinions, and a more general ten year workplan and budget for this integrated basin-wide plan.

[4] Program, page 13.
[5] Program, page 15.
[6] Program, page 16-18
[7] Program, pages 19-33.

- Federal, state, and tribal discussions on the appropriate pace for the basin-wide plan.
- Monitoring of results and revision of the plans as necessary.

Yakama Nation Recommendations

BPA needs to include adequate funds for fish and wildlife in its next rate case.

- Implementation of the NPCC subbasin plans and including wildlife mitigation over a ten-year period will cost between $1.5 and $2 billion.
- The total cost to implement the Fish and Wildlife Program and associated ESA needs is estimated to be about $240 million per year.
- Carrying out the subbasin plans would only accomplish between one-quarter and one-half of the habitat work needed in the tributaries of the Columbia and Snake Rivers.
- At the current BPA Integrated Program funding rate of $139 million per year, it would take about 100 years to implement the NPCC Fish and Wildlife Program.

Therefore, BPA should increase the amount of funds available for fish and wildlife activities to approximately $240 million per year.

The fish and wildlife managers have developed realistic and reasonable cost estimates for the rate case period.

- It takes some time to increase the rate of implementation.
- The 2002 rate case set BPA revenues with the intent of providing a fish and wildlife budget of $186 million per year.

Therefore, BPA should ramp up its Integrated Fish and Wildlife Program budget:

- $186 million in FY 2006;
- $200 million in FY 2007;
- $225 million in FY 2008;
- $240 million in FY 2009.

BPA should develop a more flexible capitalization policy to facilitate land and water acquisitions.

- BPA's current policy on capitalization is unclear regarding the use of its borrowing authority to purchase land and water.
- BPA's interpretation of its policies has inhibited the implementation of the Fish and Wildlife Program.
- If BPA uses its borrowing authority for these kinds of purchases, the rate impacts of our recommendations are significantly reduced.

Therefore, BPA should modify its capitalization policy to set up mechanisms to allow borrowing funds or the use of its borrowing authority to purchase land and water.

BPA should address the uncertainties in fish and wildlife costs in its rate case.

- The fish and wildlife managers note that with the intent of providing these estimates of future budget needs, that these estimates do not incorporate numerous factors that may increase the needs, and that these budget targets are likely to be under-estimates of actual needs.
- In the previous rate case BPA used two means to address uncertainties: Cost Recovery Adjustment Clauses and revenue collection to meet more than the minimum need.

Therefore, BPA should work with others to ensure its rates provide adequate fish and wildlife funding. BPA's rate provisions must ensure that it can adequately fund future additional fish and wildlife costs.

BPA must meet the goals of the Fish and Wildlife Program.

- After considerable analysis, the NPCC adopted in 1987 an interim estimate of the hydropower (BPA) responsibility to fish and wildlife of 5 million returning adult salmon and mitigation for resident fish and wildlife.
- The Program also identifies specific goals for resident fish and wildlife mitigation to address the operation and construction of dams and inundation by reservoirs.
- The NPCC reaffirmed these responsibilities in adopting its amended Fish and Wildlife Program in 2000.
- Current numbers of returning salmon are approximately the same as they were when the NPCC adopted the interim goal 18 years ago.

Therefore, the funding recommended by the fish and wildlife managers through FY 2009 is not likely to exceed costs necessary to achieve the Fish and Wildlife Program goals.

The Columbia Basin needs an Implementation Plan for fish and wildlife.

- The subbasin plans do not, in many cases, identify clear numerical objectives or specific actions, schedules, or costs.
- Such information would provide a statement by those responsible for the fish and wildlife resources of how the resources might be more productively managed and would provide consistent guidance in a variety of decision processes, such as NPCC amendment processes, ESA recovery planning, annual budget development, activities on Federal lands, local land use planning, etc.

Therefore, fish and wildlife managers, BPA, and the NPCC should work together to develop an implementation plan detailing the actions, schedule and costs needed to implement the Fish and Wildlife Program, and are committed to that effort.

Full implementation of the F&W Program and ESA activities will create economic benefits in tribal and rural areas.

- Most of the fish and wildlife activities would be implemented in rural areas east of the Cascade Mountains creating jobs and additional economic activity.
- As fish and wildlife populations increase as a result of these BPA investments, east-side rural areas will experience increased fishing, hunting and related activities, also creating additional jobs and invigorating local economies.
- For those (residential) customers served by utilities purchasing all of their power from BPA the recommended budget levels would result in about a $1 per month increase in their electric bill. The impact to those served by utilities that purchase less than their full requirements from BPA would be less.

Therefore, BPA should recognize the benefits to rural and tribal communities from its investments in fish and wildlife.

APPENDIX 1: CBFWA Workgroup Analysis of Future Fish and Wildlife Budget Needs in Support of the BPA Rate Case for FY2007 – FY2009

April 25, 2005 [Draft]

Summary

The staff of the Columbia Basin Fish and Wildlife Authority (CBFWA) has developed fish and wildlife costs for implementing the subbasin plans that were developed during the recent Northwest Power and Conservation Council (NPCC) effort. This effort is intended to identify future costs that BPA may need to include in its upcoming rate case. It should be noted that NOAA Fisheries and U.S. Fish and Wildlife Service did not participate in developing these estimates and neither endorse nor dispute the cost estimates and related materials.

This staff effort focused on identifying additional habitat and production costs to implement the subbasin plans. Staff has also compiled costs in the other categories of BPA's Integrated Program fish and wildlife efforts. The fish and wildlife managers recognize the considerable uncertainty in these estimates and may not be in consensus regarding the specific actions or locations implied in the subbasin cost estimates. An example of subbasins with detailed information used to develop cost estimates can be found in the Upper Columbia United Tribes (UCUT) proposal. In the Intermountain Province and Okanogan and Kootenai subbasins, UCUT compiled detailed budget estimates for 10 years based on specific management objectives and biological outcomes.

Current spending for fish and wildlife has averaged about $134 million per year over the last four years. Staff estimates that the needs for additional monitoring and evaluation, research, information management coordination and administration, and mainstem work may increase by about $9 million annually over the next several years. In addition, we have identified the ten-year costs of implementing the habitat and production strategies in the subbasin plans and wildlife plans at roughly $1.9 billion. These funds would purchase: 13 additional or major enhancements to fish hatcheries in 11 subbasins; protection for more than 48,000 acres of habitat; improvements to more than 1300 miles of streams; almost 1600 miles of fence; enhancement activities on more than 75,000 acres of habitat; and, correcting passage problems at more than 1200 diversions and culverts.

The cost estimates, including the current program costs, equate to about $240 million annually if the subbasin plans were implemented over a ten year period, $170 million if implemented over 25 years, or about $135 million if the region took 100 years to implement the draft subbasin plans. If BPA were not to use its borrowing authority, it would increase these annual costs to about $310 million, $200 million, or $143 million, respectively. These estimated costs make no provision for inflation. Including inflation, FY2009 costs could be $333 million. The region will need to determine the pace of

implementation to determine the annual costs for these fish and wildlife actions. These are significant amounts of money; however, for perspective it is important to note that the Columbia River Basin encompasses 269,000 square miles—about the size of France. Human activity has degraded most of this habitat over the past 150 years. The fish and wildlife managers share a continuing interest with BPA in seeking efficiencies in mitigation efforts to maximize on-the-ground benefits to fish and wildlife.

This paper describes the assumptions and methodology used to develop the fish and wildlife costs. The costs provided by the Upper Columbia United Tribes and others represent only those that they believe are the responsibility of the Bonneville Power Administration and were developed in a deliberative manner among the UCUT member staff.

Cost Methodology and Assumptions

Estimating Future Costs of the Fish and Wildlife Program. Staff divided the current Fish and Wildlife Program projects among six broad categories of activities or budget "compartments" (see Table 1) and compiled the average spending over the last four Fiscal Years (FY2001 – FY2004). Based on the assumption that current spending is appropriate, these estimates of the current Fish and Wildlife Program spending form the basis of the estimates of future funding needs. Staff reviewed each budget category in Table 1 and identified future changes and work that might drive future budgets up or down. Approximate annual budget increases and decreases that might result from the "drivers" were estimated. The column, "Annual Net Change" in Table 1 summarizes the results. For the "Habitat" budget category staff assumed that future budget needs would be driven by the draft subbasin plans. The draft subbasin plans may identify additional fish production needs, as well. Additional discussion of the development of Table 1 is provided in Appendix A.

Costs to Implement the Draft Subbasin Plans. The work group compiled the estimated ten-year costs to implement the draft subbasin plans based on subbasin cost estimates from two sources: 26 submitted by subbasin planners and one from NPCC staff. The costs cover activities that might reasonably be accomplished over a ten-year period. Most of the cost estimates are based on detailed unit costs to carry out specific strategies on designated amounts of acreage or stream miles. The fish and wildlife managers recognize the considerable uncertainty in these estimates and may not be in consensus regarding the all of the specific actions or locations implied in the subbasin cost estimates. In total, the subbasins for which, staff has received detailed cost estimates cover about one-half of the area of the entire Columbia River Basin. Table 2 summarizes the sources and status of the subbasin plan cost estimates.

For each subbasin, staff assigned the detailed cost estimates received to the categories identified in Table 1. As expected, habitat and fish production are the major costs to implement the draft subbasin plans. Summaries of the detailed costs submitted for each subbasin plan are provided in Appendix B.

Staff compiled subbasin plan costs for each province and extrapolated the cost to encompass the entire province on an approximate area basis when necessary to account for subbasins lacking estimates (Table 3). The extrapolation factors used are shown in Table 3. We assumed that the other (non-habitat and production) costs were included elsewhere in Table 1 and were not included here. Approximately $325 million in costs from the draft subbasin plans (largely for additional assessments, research and coordination) were assumed to be covered by the annual net changes in Table 1 and were not included in this analysis. Because this analysis extrapolated the costs over each entire province, we expect this estimated cost to increase only moderately with the incorporation of additional subbasin plan costs in future drafts of this analysis.

To help provide a context for the estimated costs to implement subbasin plans, staff compiled a rough estimate of the cost to treat habitat problems throughout the entire Columbia River Basin. The methodology and assumptions for this estimate of the larger problem are provided in Appendix C.

Upper Columbia United Tribes' Proposal. Costs submitted by the Upper Columbia United Tribes' members and others represent only those that they believe to be a BPA responsibility (as identified in the NW Power Act) and are part of a complete package of subbasin plan implementation costs (see Appendix D), including:

- Specific biological milestones based on measures in subbasin plans;
- A reasonable pace of implementation considering fiscal and institutional capacity;
- Costs estimated over 10 years with internal prioritization and flexibility; and,
- An understanding that *some* BPA obligations will sunset if requested levels of funding is provided over the ten-year implementation period.

Wildlife Cost Estimates. The CBFWA Wildlife Committee estimated the ten-year cost for mitigation of wildlife losses due to the construction of the Federal Columbia River Power System (FCRPS) and the resulting inundation. Assumptions include:

- Mitigation for 80 percent of the construction and inundation loss at a ratio of 1 acre lost: 1 acre of mitigation;
- $10 million annually for operations and maintenance (and some enhancement) on mitigation lands;
- Focus future mitigation efforts in three areas;
    - $114 million for Albeni Falls and Chief Joseph/Grand Coulee mitigation;
    - $26 million in southwest Idaho; and,
    - $60 million in the Willamette.

The overall wildlife mitigation cost includes wildlife efforts identified in the subbasin plans. Appendix E has a detailed discussion of the wildlife costs. Wildlife cost estimates imbedded in the CBFWA cost estimates do not distinguish:

- Assessments of HUs gained and where they have been credited;
- Unresolved issues of HU accounting methodology in the Willamette Basin; and,
- Hydro-allocation differentials among federal dams.

If these factors are addressed, the $300M wildlife portion of the cost estimates may be reduced or reprioritized.

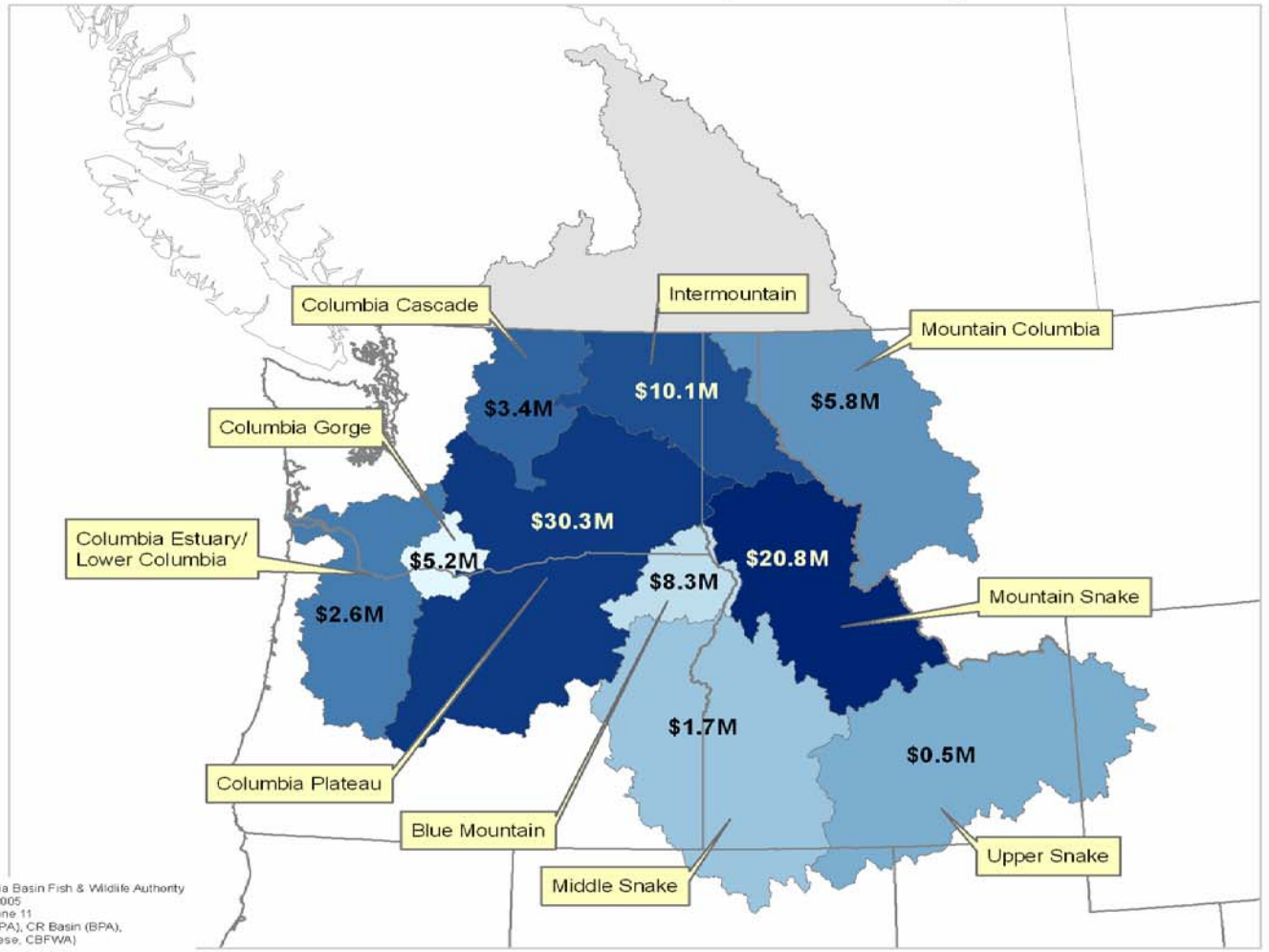
The cost estimates associated with completing mitigation for wildlife losses do not include the Confederated Salish and Kootenai Tribes (CSKT) due to their dispute with BPA over wildlife mitigation for Hungry Horse and Libby Dams. If the CSKT receive wildlife mitigation in the future, these costs will need to be adjusted accordingly.

In Table 8 the analysis attempts to estimate the physical results from implementing the subbasin plans by compiling the extent of various activities proposed by the plans.

Analysis of Total Costs. To examine the effects that the pace of implementation, and other assumptions, has on the annual costs, staff developed a spread sheet for converting estimates of total and annual costs in the Table 1 budget categories into annual costs over differing periods of implementation. This model allows scenarios with different assumptions to be examined and compared in terms of their annual costs. Tables 4 through 7 provide one example of such an analysis. Table 4 shows the input assumptions, in this case, those annual costs summarized in Table 1 and the estimated cost of implementing the draft subbasin plans from Table 1 and 3. The CBFWA Wildlife Committee estimate of the cost to complete mitigation of wildlife losses due to the construction of the FCRPS is in Table 4 also. Tables 5, 6, and 7 show the first ten years of annual costs for implementation over different time periods, in this case, ten years, 25 years, and 100 years, respectively. In these analyses the effect of inflation is also shown, assuming a six percent inflation rate for riparian land and water and a three percent rate for other goods and services.

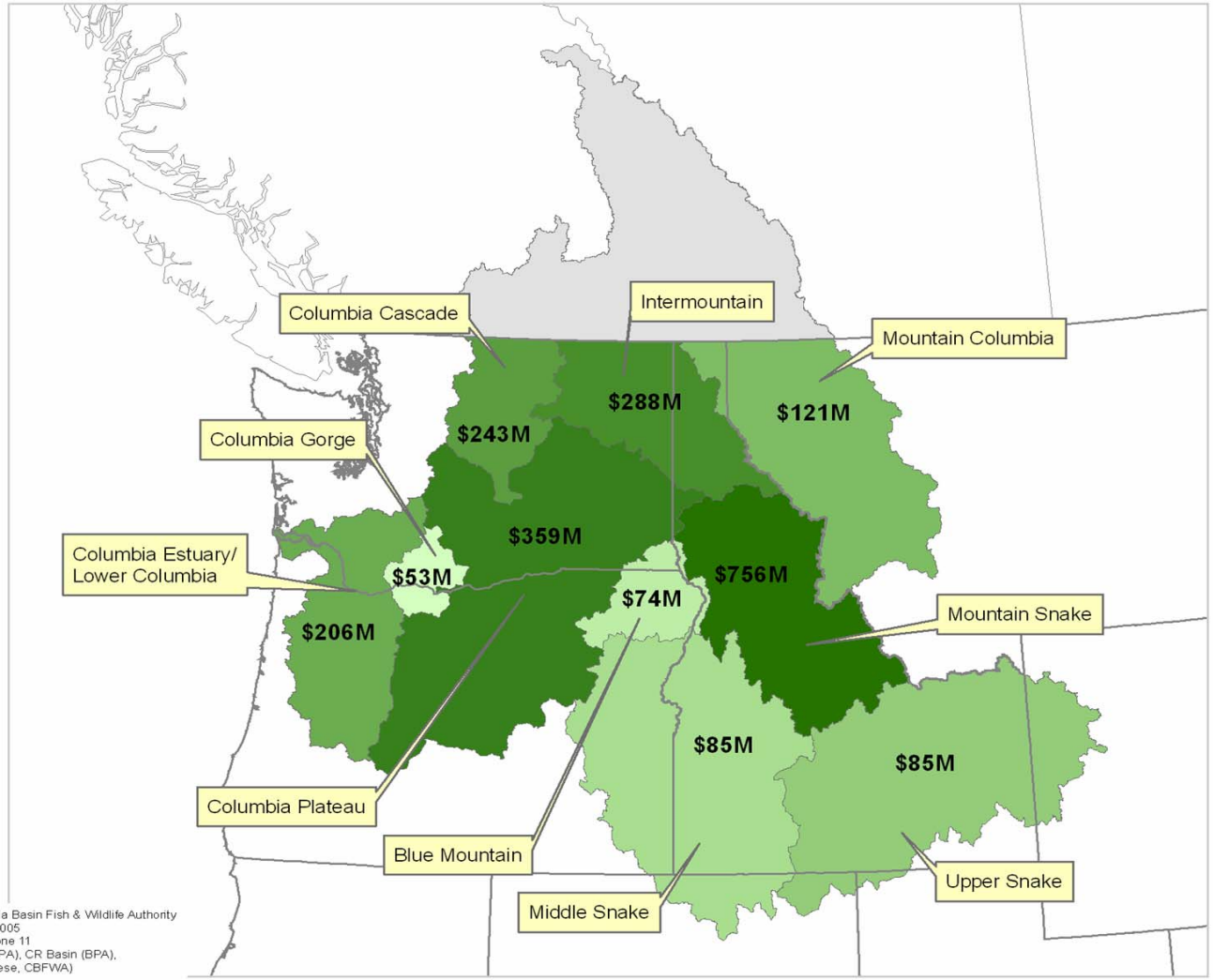
Columbia Basin Fish and Wildlife Authority

Figure 1. BPA Fish and Wildlife Average Investment (FY2001-04)



Columbia Basin Fish and Wildlife Authority

Figure 2. Estimated Future Fish and Wildlife Investment to Implement Subbasin Plans



Map Created by: Columbia Basin Fish & Wildlife Authority
Create Date: March 15, 2005
Projection: NAD 1983, Zone 11
Data Layers: Province (BPA), CR Basin (BPA),
Financial Data (Tom Giese, CBFWA)

Results and Discussion: Future Fish and Wildlife Costs

Formulating and evaluating all of the factors necessary to estimate fish and wildlife costs is a difficult task. We approached this analysis by examining various categories of costs for the BPA Integrated Fish and Wildlife Program, with particular attention to the costs of implementing programs and projects proposed by one or more parties during their subbasin planning process and implementing certain wildlife provisions. The resulting cost estimates are based on a variety of assumptions. These assumptions and any specific projects or actions that are included in the estimates still must be reviewed by the NPCC and undergo a project selection process. The list of projects also has not been thoroughly reviewed by the fish and wildlife managers. As such, specific projects may or may not be supported by individual managers.

Despite the caveats listed above, we think that the overall cost estimates that we have produced are a valuable indicator of the level of funding that is needed. The cost categories included:

- Subbasin plans - the development of subbasin plans did not include detailed project proposals and budgets. To overcome this problem, various subbasin planners were contacted to provide additional information about the resources needed to implement their plan. The estimates were expanded to cover subbasins were these estimates were not available.
- We undertook a similar process for wildlife mitigation costs. Some specific high interest areas were identified as priorities for the rate case. Estimates from the managers in the area were developed and included in the estimates.
- Our analysis does not include a comprehensive assessment of costs for mainstem measures beyond those contemplated in the Updated Proposed Action or the NPCC Program. However it is clear that additional mainstem measures are necessary to protect, recover, and restore anadromous fish impacted by the federal hydrosystem and need to be funded.

As we noted above these cost estimates and the specific projects that would be implemented need further review. We anticipate that they will become better defined as they pass through the regional decision-making processes. Nonetheless, we continue to believe that the overall estimates are an accurate reflection of the resources that are necessary to make progress for fish and wildlife in the basin.

The analysis summarized in Table 3 indicates that draft subbasin plans will cost about $1.5 billion to implement. This is probably a minimum estimate and their implementation cost will likely increase as more subbasin estimates are incorporated. In addition, the full costs to improve tributary passage facilities in the Salmon and John Day subbasins have not been included and their addition will increase subbasin plan costs. The costs of implementing the subbasin plans below Bonneville dam have been estimated by extrapolation and have probably been underestimated.

Figures 1 and 2 show the geographic distribution of current (FY 2003 and 2004) BPA spending for fish and wildlife and estimated future investments needed to implement the subbasin plans, respectively. Past investments have been largest in the Plateau and Mountain Snake Provinces with a smaller emphasis on the Upper Columbia and Blue Mountain Provinces. Generally, the subbasin plans continue that emphasis. The fish and wildlife managers are mindful of the economic benefits that accrue to rural communities both as a result of the direct investment of BPA funds in these communities and as a result of increased fishing and hunting opportunities as fish and wildlife populations increase.

This preliminary analysis of the costs of the draft subbasin plans indicate that the subbasin planners anticipate considerably more fish production facilities are needed than assumed in the BPA/NPCC staff analysis in Table 1. That initial analysis assumed no additional production facilities, while this analysis estimates more $304 million in additional production costs. In addition, the costs of changes to existing fish production facilities that may be anticipated from the NPCC Artificial Production Review and Evaluation process and the Biological Opinions are not included in these costs, but will fall largely in the Reimbursed Expenses portion of the BPA budget.

Table 4 summarizes the overall costs of continuing to carry out the NPCC Fish and Wildlife Program (and associated Biological Opinion actions) and to implement the subbasin plans. At the bottom of Table 4, is a summary of these annual costs (continuing and additional) and the ten-year costs of wildlife mitigation and the subbasin plan implementation. These add to about $3.1 billion over ten years or a little more than $300 million per year. If BPA uses its borrowing authority, these annual costs could be reduced to about $240 million per year (see Table 5), the annual amount for which CBFWA recommends that BPA budget.

The analyses shown in Tables 5 through 7 demonstrate the major effects in reducing annual costs by spreading the implementation costs over longer periods. The current examples assume about $24 million per year (or a ten-year total of $240 million) in current habitat spending being re-programmed to cover implementation of the subbasin plans. These analyses indicated that spending at current levels will take about 100 years to implement the draft subbasin plans.

Table 8 summarizes the physical accomplishments that form the basis of the subbasin cost estimates. Implementing the subbasin plans would accomplish: 13 additional or major enhancements to fish hatcheries in 11 subbasins; protection for more than 48,000 acres of habitat; improvements to more than 1300 miles of streams; enhancement activities on more than 75,000 acres of habitat; and, correcting passage problems at more than 1200 diversions and culverts. These estimated achievements are an underestimate because not all achievements are included, only those that fit within the categories used to aggregate them. Further, the material submitted for many of the subbasins was not sufficiently detailed to estimate the physical accomplishments expected. It must be noted

that the achievements reported here do not directly represent increases in fish and wildlife populations (the ultimate objective of implementing the subbasin plans).

While these are large costs, they are consistent with earlier estimates of BPA costs to meet its obligations to fish and wildlife. For example, CBFWA has developed two previous fish and wildlife cost estimates. The first was in 1998 as part of the Multi-Year Implementation Plan. This effort developed costs for implementing all of the elements of the Council Program and FCRPS Biological Opinion. The annual costs were estimated to be $200 to $225 million in 1998 dollars, or about $240 to $265 million per year in current dollars.

In 2000, CBFWA and the Council conducted the Provincial Review to determine the costs of implementing projects that had been approved by the fish and wildlife managers, the Council, and the Independent Scientific Review Panel. The Provincial Review identified BPA revenue requirements for the Direct Program budget of $310 million per year for FY 2003 through FY 2006, or about $350 million per year in current dollars. The history of BPA's F&W spending is included Appendix F.

Uncertainty and Risk Management

Although this analysis provides the most accurate estimate available of the costs to implement the NPCC Fish and Wildlife Program and associated ESA activities, there are other factors that create uncertainty about the ultimate cost of the BPA Integrated Program. This uncertainty derives from numerous sources.

1. Our analysis assumed that other branches of the federal government would provide contributions. For example, the costs for implementing plans in several subbasins (notably those in the Intermountain Province) assume funding from the federal land management agencies that may or may not be forthcoming. If additional Federal appropriations are not available, the region will need to address how to accomplish this work.
2. The analysis of budget "drivers" in Table 1 is based on several assumptions about the ability to reallocate current program expenditures and reduce the need for future budget requirements. These assumptions are untested. For example, Table 1 assumes that BPA and NPCC will reduce current project-scale monitoring and evaluation to make funds available to conduct increased programmatic M&E. How this will be accomplished is unclear, consequently any savings are uncertain.
3. NOAA Fisheries staff has indicated on several occasions that implementing the subbasin plans may not address all of the activities in the forthcoming recovery plans.
4. Pending litigation on the current Biological Opinions may result in significant changes in required fish and wildlife activities, and may increase costs or affect revenues.
5. Implementation of the "Mainstem Amendment" to the NPCC Fish and Wildlife Program may increase costs or affect revenues also.

6. When the currently favorable ocean conditions deteriorate, BPA may be called upon to fund additional activities to address weak-stock survival or productivity.
7. The NPCC Artificial Production Review and Evaluation and the Hatchery Genetic Management Plans call for changes in the operation of many hatcheries built as mitigation for the hydropower system. These costs are not presently reflected in the BPA draft costs for the upcoming rate case and costs for the Reimbursable and the Integrated Program budgets may increase.
8. The prospect of shifting the cost of the Mitchell Act hatcheries to BPA is a substantial uncertainty, considering Congress's previous interest in this issue and increasing pressures on the federal budget.
9. Inflation is not considered in our recommendation, and funding to provide for inflationary costs is often necessary to achieve individual project milestones as scheduled. A three percent inflation rate could result in a $25 million increase in annual budget needs by the end of the rate period in FY 2009.

All of these uncertainties increase the probability that BPA's Integrated Program budget needs will be higher than the budget levels we recommend. BPA should accommodate these uncertainties explicitly when it sets its rates and when it designs rate adjustment mechanisms. BPA's rate provisions must ensure that it can adequately fund future additional fish and wildlife costs.

Economic Impacts

The budget levels recommended here would result in customers served by utilities purchasing all of their power from BPA paying about $1.00 per month more. The impact to those served by utilities that purchase less than their full requirements from BPA would be less.

As a rule of thumb, BPA assumes that every $85 million represents 1 mill or $0.001 per kilowatt hour on BPA's wholesale power rates for full requirements customers. The CBFWA recommendations for FY 2007 through FY 2008 average $80 million more than current spending or approximately $0.001 per kilowatt-hour. The average residential consumer uses about 1,100 kilowatt-hours per month; therefore the fish and wildlife cost increase represents about $1 per month for the average residential customer served by a utility that purchases all of its power form BPA. BPA provides approximately 40 percent of the electricity used in the Pacific Northwest; the impacts for 60 percent of the region's residential consumers would be less than $1 per month.

Most of the fish and wildlife activities would be implemented in rural areas east of the Cascade Mountains (Figures 1 and 2). Figure 1 shows the geographic distribution of BPA average annual fish and wildlife spending from its Integrated Program budget for the Fiscal Years 2001 through FY 2004. These investments pay salaries and purchase materials creating additional jobs and economic activity. Figure 2 shows the geographic distribution of estimated ten-year investments in implementing the NPCC subbasin plans. The effects of these investments can be expected to ripple through the tribal and rural economies, creating additional jobs and economic activity.

As fish and wildlife populations increase as a result of these BPA investments, east-side tribal and rural areas will experience increased spending by fishers, hunters, and recreationalists creating additional jobs and economic benefits. For example, in 2001, as a result of previous investments in salmon mitigation and improvements in ocean conditions, salmon runs increased sufficiently for Idaho to open a recreational fishing season on salmon. The Idaho Department of Fish and Game examined the economic benefits of the 2001 salmon season and found that the increased fish opportunity was responsible for almost $90 million in expenditures. These expenditures were split evenly between the local river communities and the rest of the state. However, impacts were more significant in the smaller local economies. Angler expenditures in Riggins, Idaho (on the Salmon River) during the salmon fishing season stimulated 23 percent of the town's annual sales.

Therefore, the fish and wildlife managers recommend that BPA also consider the important benefits to rural economies of its investments in fish and wildlife while considering the costs of the actions.

Conclusions and Recommendations

Based on the analysis in this report, the fish and wildlife managers make the following conclusions and recommendations.

BPA needs to include adequate funds for fish and wildlife in its next rate case.

- Implementation of the NPCC subbasin plans and including wildlife mitigation over a ten-year period will cost between $1.5 and $2 billion.
- The total cost to implement the Fish and Wildlife Program and associated ESA needs is estimated to be about $240 million per year.
- Carrying out the subbasin plans would only accomplish between one-quarter and one-half of the habitat work needed in the tributaries of the Columbia and Snake Rivers.
- At the current BPA Integrated Program funding rate of $139 million per year, it would take about 100 years to implement the NPCC Fish and Wildlife Program.

➢ ***Therefore,*** *the fish and wildlife managers recommend that BPA increase the amount of funds available for fish and wildlife activities to approximately $240 million per year.*

The fish and wildlife managers have developed realistic and reasonable cost estimates for the rate case period.

- It takes some time to increase the rate of implementation.
- The 2002 rate case set BPA revenues with the intent of providing a fish and wildlife budget of $186 million per year.

➢ ***Therefore,*** *the fish and wildlife managers recommend that BPA ramp up its Integrated Fish and Wildlife Program budget to meet the these targets:*

- *$186 million in FY 2006;*
- *$200 million in FY 2007;*

- *$225 million in FY 2008; and,*
- *$240 million in FY 2009.*

BPA should develop a more flexible capitalization policy to facilitate land and water acquisitions.

- BPA's current policy on capitalization is unclear regarding the use of its borrowing authority to purchase land and water.
- BPA's interpretation of its policies has inhibited the implementation of the Fish and Wildlife Program.
- If BPA uses its borrowing authority for these kinds of purchases, the rate impacts of our recommendations are significantly reduced.

➢ ***Therefore,*** *BPA should modify its capitalization policy to set up mechanisms to allow borrowing funds or the use of its borrowing authority to purchase land and water.*

BPA should address the uncertainties in fish and wildlife costs in its rate case.

- The fish and wildlife managers note that with the intent of providing these estimates of future budget needs, that these estimates do not incorporate numerous factors that may increase the needs, and that these budget targets are likely to be under-estimates of actual needs.
- In the previous rate case BPA used two means to address uncertainties: Cost Recovery Adjustment Clauses and revenue collection to meet more than the minimum need.

➢ ***Therefore,*** *the fish and wildlife managers urge BPA to work with others to ensure its rates provide adequate fish and wildlife funding. BPA's rate provisions must ensure that it can adequately fund future additional fish and wildlife costs.*

BPA must meet the goals of the Fish and Wildlife Program.

- After considerable analysis, the NPCC adopted in 1987 an interim estimate of the hydropower (BPA) responsibility to fish and wildlife of 5 million returning adult salmon and mitigation for resident fish and wildlife.
- The Program also identifies specific goals for resident fish and wildlife mitigation to address the operation and construction of dams and inundation by reservoirs.
- The NPCC reaffirmed these responsibilities in adopting its amended Fish and Wildlife Program in 2000.
- Current numbers of returning salmon are approximately the same as they were when the NPCC adopted the interim goal 18 years ago.

➢ ***Therefore,*** *the funding recommended by the fish and wildlife managers through FY 2009 is not likely to exceed costs necessary to achieve the Fish and Wildlife Program goals.*

The Columbia Basin needs an Implementation Plan for fish and wildlife.

- The subbasin plans do not, in many cases, identify clear numerical objectives or specific actions, schedules, or costs.
- Such information would provide a statement by those responsible for the fish and wildlife resources of how the resources might be more productively managed and

would provide consistent guidance in a variety of decision processes, such as NPCC amendment processes, ESA recovery planning, annual budget development, activities on Federal lands, local land use planning, etc.

- ***Therefore,*** *the fish and wildlife managers strongly recommend development of an implementation plan detailing the actions, schedule and costs needed to implement the Fish and Wildlife Program, and are committed to that effort.*

Full implementation of the F&W Program and ESA activities will create economic benefits in tribal and rural areas.

- Most of the fish and wildlife activities would be implemented in rural areas east of the Cascade Mountains creating jobs and additional economic activity.
- As fish and wildlife populations increase as a result of these BPA investments, east-side rural areas will experience increased fishing, hunting and related activities, also creating additional jobs and invigorating local economies.
- For those (residential) customers served by utilities purchasing all of their power from BPA the recommended budget levels would result in about a $1 per month increase in their electric bill. The impact to those served by utilities that purchase less than their full requirements from BPA would be less.

Therefore*, the fish and wildlife managers recommend that BPA examine the benefits to rural economies from its investments in fish and wildlife*.

Table 1. Future Fish and Wildlife Program Cost Assumptions

F&W Program Categories	Recent Spending (FY01-04 Ave.)	Budget Drivers (UP)	Budget Drivers (DOWN)	Annual Net Change	Estimated Ten-Year Cost ($M)
Info. Mgmt., Coordination & Administration (IMCA)	$11.7	Watershed coordination support (~$2M); Regional data mgmt. (~$2M); Harv/Hab/Prod integration (~$0.5)	Little opportunity	Increase (+$4.5M)	
Monitoring & Evaluation	$30.0	Bi-Op driven large-scale monitoring; Mainstem evaluations; Future subbasin planning; Fall chinook monitoring (?)	Efficiencies in project scale monitoring from regional M&E plan; Reprogramming short-term assessments	No net change	
Research	$11.0	Bi-Op life-stage research; NPCC Research Plan; Innovative category	Better focus, less opportunistic research; Emerging issues (e.g.,	Minor Reduction	
Mainstem Programs	$6.0	BiOp increases in predator control (~$1M); Lamprey work (~$1M)	Little opportunity	Increase (+$2M)	
Fish Production	$39.6	O&M for new facilities (Chief Joe, NEOH, Klickitat, Mid-C coho, Walla Walla, Klickitat), not including capital, (~$3M); Bi-Op hatchery improvements (~$2M)	Efficiencies in project-scale operations; Completion of some construction	Increase (+$3M)	$291
Habitat	$35.8	Subbasin plans; BiOp off-site mitigation	Reprogramming based on subbasin plans		
Land Protection					$404
Instream Flow Improvement					$34
Enhancement & Restoration					$626
Additional "Small" Tributary Passage (Expense)					$187
Additional "Major" Tributary Passage (Capital)					$21
Wildlife					$300
Total	$134.1			+$9M (without Habitat)	$1,864

Table 2. Status of Subbasin Plan Cost Estimates

Subbasin	Source	Status	SB-Province Factor
Mtn Columbia Province			**X1**
Kootenai - Idaho	UCUT	Included	
Kootenai - Montana	SKT/MDFWP	Included	
Flathead	SKT/MDFWP	Included	
Intermountain Province			**X1**
Coeur D'Alene	UCUT	Included	
Columbia/L. Roosevelt	UCUT	Included	
Pend Oreille	UCUT	Included	
Spokane	UCUT	Included	
Mountain Snake Province			**X1.5****
Clearwater	NPT	Included	
Lo/Little Salmon	NPT	Included	
Blue Mountain Province			**X1**
Grande Ronde	NPT	Included	
Asotin	NPT	Included*	
Imnaha	NPT	Included	
Snake-HellsCanyon	NPT	Included	
Upper & Middle Snake Province			**X2****
Malheur	BPT	Included	
Owyhee	SBT	Included	
Columbia Cascade Province			**X1**
Wenatchee	YN	Included	
Entiat	YN	Included	
Methow	YN	Included	
Okanogan	UCUT	Included	
Plateau Province			**X2****
Umatilla	NPCC staff	Included	
Tucannon	NPT	Included*	
Yakima	YN	Included	
Rock Creek	YN	Included	
Walla Walla	CTUIR	Included	
Columbia Gorge Province			**X1.5****
Hood	NPCC staff	Included	
White Salmon	YN	Included	
Klickitat	YN	Included	
Lower Columbia & Estuary Province			**X0**
WA Subbasins	LCFRB		

Others - Non-Tribal subbasin planners
* Less land acquisition costs
** Facility capital costs not extrapolated.

Table 3. Estimated Additional Costs to Implement Subbasin Plans

PRELIMINARY

SUBBASIN PLAN COST	Mtn Columbia	Inter Mtn	Mtn Snake	Blue Mtn	U&M Snake	Columbia Cascade	Plateau	Columbia Gorge	Lo. Col. & Estuary	Total Habitat /Prod Costs (X1.1)	Total Additional Costs (X1.1)
IMCA - Regional Data Management	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	
IMCA - Watershed Coordination	$2.0	$2.0	$5.0	$0.4	$0.0	$0.0	$0.2	$0.0	$0.0	$10.5	
M&E - Programmatic M&E	$0.0	$0.0	$0.0	$0.0	$11.0	$9.8	$0.0	$0.0	$0.0	$22.9	
M&E - Mainstem Evaluations	$0.0	$1.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$1.1	
M&E - Subbasin Planning	$0.0	$0.0	$0.0	$0.0	$0.0	$0.3	$0.0	$0.3	$0.0	$0.6	
Research	$0.0	$2.7	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$2.9	
Production - New Facilities (Capital)	$22.8	$37.8	$0.0	$10.8	$5.6	$68.8	$21.6	$7.6	$0.0	$192.4	$192.4
Production - FWP facilities O/M	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	
Production - BiOp Improvements	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	
Production - Other Costs (Expenses)	$1.3	$11.9	$24.6	$3.4	$15.0	$4.9	$10.0	$18.5	$0.0	$98.5	$98.5
Habitat - Land Protection Cost	$34.7	$52.0	$84.8	$2.7	$24.0	$62.8	$102.7	$3.7	$0.0	$404.2	$404.2
Habitat - Instream Flow Cost	$0.0	$0.0	$0.0	$0.0	$6.2	$6.5	$10.0	$8.2	$0.0	$34.0	$34.0
Habitat - Enhancement & Restoration Cost	$52.2	$76.3	$240.3	$37.0	$46.8	$37.3	$73.3	$5.8	$0.0	$625.8	$625.8
Habitat - Wildlife Mitigation Cost	$0.0	$70.9	$0.0	$0.0	$21.9	$27.6	$0.0	$0.0	$0.0	$132.5	
Habitat - Additional Assessment	$6.8	$33.1	$34.3	$10.2	$10.2	$11.5	$37.8	$4.5	$0.0	$163.2	
Habitat - Additional "Small" Tributary Passage (Expense)	$1.1	$0.0	$117.2	$9.3	$17.0	$7.2	$18.1	$0.5	$0.0	$187.4	$187.4
Habitat - Additional "Major" Tributary Passage (Capital)	$0.0	$0.0	$0.0	$0.0	$0.0	$6.5	$9.0	$3.8	$0.0	$21.2	$21.2
Habitat - Other Costs	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	
Total Province Additional	$120.8	$287.7	$506.1	$73.7	$157.8	$243.2	$282.8	$52.8	$0.0	$1,897.4	$1,563.6
Total Habitat and Production Costs (from Subbasin Plans)										$1,897.4	
Total 10 year Additional Costs			**$1,564**								

Assumptions

Information Management, Coordination & Administration (IMCA)	
Continuing Cost	**$11.7**
Regional Data Management (*additional $M/yr*)	$2.0
Production/Habitat Integration (*additional $M/yr*)	$0.5
Watershed Coordination Support (*additional $M/yr*)	$2.0

Research	
Continuing Cost	**$7.4**
BiOp life-stage research *(additional $M/yr)*	$1.0
NPCC Research Plan work *(additional $M/yr)*	$4.0
Innovative category *(additional $M/yr)*	$0.0

Fish Production (Anadromous & Resident)	
Continuing Cost	**$39.6**
BiOp hatchery improvements *($M/yr)*	$2.0
Total New Facilities Cost (Capital) *($M Total)*	$192.4
Total Additional Costs & O/M (Expense) (*$M Total*)	$98.5

Habitat	
Continuing Cost	**$12.1**
Land Protection Cost (*$M Total*)	$404.2
Instream Flow Improvement Cost (*$M Total)*)	$34.0
Enhancement & Restoration Cost (*$M Total*)	$625.8
Additional "Small" Tributary Passage (Expense) (*$M Total*)	$187.4
Additional "Major" Tributary Passage (Capital) (*$M Total*)	$21.2
Wildlife Mitigation *($M Total)*	$300.0

Other Assumptions	
Total Annual Continuing Cost	**$94.4**
Total Annual Additions	**$26.5**
Total 10-Year Wildlife Mitigation Cost	**$300.0**
Total 10-Year Additional Costs from Subbasin Plans	**$1,563.6**
Total Cost of 10-Year Effort	**$3,072.8**
Land Cost Inflation Rate	6%
Other Items Inflation Rate	3%

Other Items Inflation Rate Input	Inflation Rate	Weight
Labor	0.0%	0.5
Materials	0.0%	0.5

Monitoring & Evaluation	
Continuing Cost	**$17.6**
Programmatic M&E (*additional $M/yr*)	$10.0
Additional mainstem evaluations *(additional $M/yr)*	$1.0
Future subbasin planning *(additional $M/yr)*	$2.0

Mainstem Program Expenses	
Continuing Cost	**$6.0**
Additional Predator Control *(additional $M/yr)*	$1.0
Additional Lamprey work *(additional $M/yr)*	$1.0

Table 5. Estimated Fish and Wildlife

PRELIMINARY

Duration of Implementation (Years)	10

Cost Item (*$Millions/year*)	Assume	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	Ten Year Cost
Information Management, Coordination & Administration												
Continuing Cost	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	$117.0
Regional Data Management	2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	$20.0
Production/Habitat Integration	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	$5.0
Watershed Coordination Support	2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	$20.0
IMCA Total		$16.2	$16.2	$16.2	$16.2	$16.2	$16.2	$16.2	$16.2	$16.2	$16.2	$162.0
Monitoring & Evaluation												
Continuing Cost	17.58	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	$175.8
Programmatic M&E	10	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	$100.0
Additional mainstem evaluations	1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	$10.0
Future subbasin planning	$2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	$20.0
M&E Total		$30.6	$30.6	$30.6	$30.6	$30.6	$30.6	$30.6	$30.6	$30.6	$30.6	$305.8
Research												
Continuing Cost	7.44	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	$74.4
BiOp life-stage research	1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	$10.0
NPCC Research Plan	4.00	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	$40.0
Innovative category	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	$0.0
Research Total		$12.4	$12.4	$12.4	$12.4	$12.4	$12.4	$12.4	$12.4	$12.4	$12.4	$124.4
Mainstem Program Expense												
Continuing Cost	6.00	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	$60.0
Additional Predator Control	1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	$10.0
Additional Lamprey work	1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	$10.0
Mainstem Total		$8.0	$8.0	$8.0	$8.0	$8.0	$8.0	$8.0	$8.0	$8.0	$8.0	$80.0
Fish Production												
Continuing Cost	$39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6	$396.0
Additional O&M on completed FWP facilities	$3.0	1.0	1.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	$24.0
BiOp hatchery improvements	$2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	$20.0
Total New Facilities Cost (Capital)	$192.4	19.2	19.2	19.2	19.2	19.2	19.2	19.2	19.2	19.2	19.2	
Total Additional Costs & O/M (Expense)	$98.5	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	$98.5
Fish Production Total		$71.7	$71.7	$72.7	$72.7	$73.7	$73.7	$73.7	$73.7	$73.7	$73.7	$730.9
Habitat												
Continuing Cost	$12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	$121.0
Land Protection Cost	$404.2	40.4	40.4	40.4	40.4	40.4	40.4	40.4	40.4	40.4	40.4	$404.2

Table 5. Estimated Fish and Wildlife

Duration of Implementation (Years)	10

Cost Item (*$Millions/year*)	Assume	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	Ten Year Cost
Instream Flow Improvement Cost	$34.0	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	$34.0
Enhancement & Restoration Cost	$625.8	62.6	62.6	62.6	62.6	62.6	62.6	62.6	62.6	62.6	62.6	$625.8
Annual Habitat O&M	0.00%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	$0.0
Assessments	$0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	$0.0
Additional "Small" Tributary Passage (Expense)	$187.4	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7	$187.4
Additional "Major" Tributary Passage (Capital)	$21.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	$21.2
Additional Tributary Passage O&M	0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	$0.0
Additional Wildlife Mitigation	$300.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	$300.0
Additional Wildlife O&M	0.00%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	$0.0
Habitat Total		$169.4	$169.4	$169.4	$169.4	$169.4	$169.4	$169.4	$169.4	$169.4	$169.4	$1,693.7
Land & Water Cost Inflation Rate	6%											
Other Items Inflation Rate	3%											
compound L&W %		1.0000	1.0600	1.1236	1.1910	1.2625	1.3382	1.4185	1.5036	1.5938	1.6895	
compound other %		1.0000	1.0300	1.0609	1.0927	1.1255	1.1593	1.1941	1.2299	1.2668	1.3048	
total L&W		73.8	73.8	73.8	73.8	73.8	73.8	73.8	73.8	73.8	73.8	738.2
total other		234.5	234.5	235.5	235.5	236.5	236.5	236.5	236.5	236.5	236.5	2358.7
inflated L&W		73.8	78.2	82.9	87.9	93.2	98.8	104.7	111.0	117.7	124.7	
inflated other		234.5	241.5	249.8	257.3	266.1	274.1	282.4	290.8	299.5	308.5	
TOTAL Cost without Borrowing *($M/yr)*	$3,096.8	$308.3	$308.3	$309.3	$309.3	$310.3	$310.3	$310.3	$310.3	$310.3	$310.3	$3,096.8
Capital Cost w/o borrowing		$70.7	$70.7	$70.7	$70.7	$70.7	$70.7	$70.7	$70.7	$70.7	$70.7	$706.6
Percent capitalized	100%	$70.7	$70.7	$70.7	$70.7	$70.7	$70.7	$70.7	$70.7	$70.7	$70.7	
expensed		$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	
Revenue Required for borrowed		$7.1	$7.1	$7.1	$7.1	$7.1	$7.1	$7.1	$7.1	$7.1	$7.1	
Capital Cost with borrowing		$7.1	$7.1	$7.1	$7.1	$7.1	$7.1	$7.1	$7.1	$7.1	$7.1	$70.7
Annual cost less capital		$237.6	$237.6	$238.6	$238.6	$239.6	$239.6	$239.6	$239.6	$239.6	$239.6	
TOTAL Cost with Borrowing *($M/yr)*	$2,460.9	$244.7	$244.7	$245.7	$245.7	$246.7	$246.7	$246.7	$246.7	$246.7	$246.7	$2,460.9
TOTAL Costs with inflation												
with BPA Borrowing												
without BPA Borrowing		$308.3	$319.7	$332.7	$345.2	$359.3	$372.9	$387.1	$401.8	$417.2	$433.2	$0.0

Table 6. Estimated Fish and Wildlife

Duration of Implementation (Years)	25

Cost Item (*$Millions/year*)	Assume	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	Ten Year Cost
Information Management, Coordination & Administration												
Continuing Cost	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	$117.0
Regional Data Management	2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	$20.0
Production/Habitat Integration	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	$5.0
Watershed Coordination Support	2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	$20.0
IMCA Total		$16.2	$16.2	$16.2	$16.2	$16.2	$16.2	$16.2	$16.2	$16.2	$16.2	$162.0
Monitoring & Evaluation												
Continuing Cost	17.58	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	$175.8
Programmatic M&E	10	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	$100.0
Additional mainstem evaluations	1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	$10.0
Future subbasin planning	$2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	$20.0
M&E Total		$30.6	$30.6	$30.6	$30.6	$30.6	$30.6	$30.6	$30.6	$30.6	$30.6	$305.8
Research												
Continuing Cost	7.44	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	$74.4
BiOp life-stage research	1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	$10.0
NPCC Research Plan	4.00	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	$40.0
Innovative category	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	$0.0
Research Total		$12.4	$12.4	$12.4	$12.4	$12.4	$12.4	$12.4	$12.4	$12.4	$12.4	$124.4
Mainstem Program Expense												
Continuing Cost	6.00	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	$60.0
Additional Predator Control	1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	$10.0
Additional Lamprey work	1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	$10.0
Mainstem Total		$8.0	$8.0	$8.0	$8.0	$8.0	$8.0	$8.0	$8.0	$8.0	$8.0	$80.0
Fish Production												
Continuing Cost	$39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6	$396.0
Additional O&M on completed FWP facilities	$3.0	1.0	1.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	$24.0
BiOp hatchery improvements	$2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	$20.0

Table 6. Estimated Fish and Wildlife

Duration of Implementation (Years)	25

Cost Item (*$Millions/year*)	Assume	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	Ten Year Cost
Total New Facilities Cost (Capital)	$192.4	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	
Total Additional Costs & O/M (Expense)	$98.5	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	$39.4
Fish Production Total		$54.2	$54.2	$55.2	$55.2	$56.2	$56.2	$56.2	$56.2	$56.2	$56.2	$556.4
Habitat												
Continuing Cost	$12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	$121.0
Land Protection Cost	$404.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	$161.7
Instream Flow Improvement Cost	$34.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	$13.6
Enhancement & Restoration Cost	$625.8	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	$250.3
Annual Habitat O&M	0.00%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	$0.0
Assessments	$0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	$0.0
Additional "Small" Tributary Passage (Expense)	$187.4	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	$75.0
Additional "Major" Tributary Passage (Capital)	$21.2	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	$8.5
Additional Tributary Passage O&M	0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	$0.0
Additional Wildlife Mitigation	$300.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	$120.0
Additional Wildlife O&M	0.00%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	$0.0
Habitat Total		$75.0	$75.0	$75.0	$75.0	$75.0	$75.0	$75.0	$75.0	$75.0	$75.0	$750.1
TOTAL Cost without Borrowing *($M/yr)*	$1,978.6	$196.5	$196.5	$197.5	$197.5	$198.5	$198.5	$198.5	$198.5	$198.5	$198.5	$1,978.6
TOTAL Cost with Borrowing *($M/yr)*	$1,724.3	$171.0	$171.0	$172.0	$172.0	$173.0	$173.0	$173.0	$173.0	$173.0	$173.0	$1,724.3
TOTAL with inflation		$196.5	$203.2	$211.3	$218.7	$227.4	$235.4	$243.6	$252.2	$261.1	$270.3	$2,319.7

Table 7. Estimated Fish and Wildlife

Duration of Implementation (Years)	**100**

Cost Item (*$Millions/year*)	Assume	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	Ten Year Cost
Information Management, Coordination & Administration												
Continuing Cost	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	$117.0
Regional Data Management	2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	$20.0
Production/Habitat Integration	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	$5.0
Watershed Coordination Support	2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	$20.0
IMCA Total		$16.2	$16.2	$16.2	$16.2	$16.2	$16.2	$16.2	$16.2	$16.2	$16.2	$162.0
Monitoring & Evaluation												
Continuing Cost	17.58	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	$175.8
Programmatic M&E	10	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	$100.0
Additional mainstem evaluations	1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	$10.0
Future subbasin planning	$2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	$20.0
M&E Total		$30.6	$30.6	$30.6	$30.6	$30.6	$30.6	$30.6	$30.6	$30.6	$30.6	$305.8
Research												
Continuing Cost	7.44	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	$74.4
BiOp life-stage research	1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	$10.0
NPCC Research Plan	4.00	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	$40.0
Innovative category	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	$0.0
Research Total		$12.4	$12.4	$12.4	$12.4	$12.4	$12.4	$12.4	$12.4	$12.4	$12.4	$124.4
Mainstem Program Expense												
Continuing Cost	6.00	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	$60.0
Additional Predator Control	1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	$10.0
Additional Lamprey work	1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	$10.0
Mainstem Total		$8.0	$8.0	$8.0	$8.0	$8.0	$8.0	$8.0	$8.0	$8.0	$8.0	$80.0
Fish Production												
Continuing Cost	$39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6	$396.0
Additional O&M on completed FWP facilities	$3.0	1.0	1.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	$24.0
BiOp hatchery improvements	$2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	$20.0

Table 7. Estimated Fish and Wildlife

PRELIMINARY

Duration of Implementation (Years)	**100**

Cost Item (*$Millions/year*)	Assume	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	Ten Year Cost
Total New Facilities Cost (Capital)	$192.4	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	
Total Additional Costs & O/M (Expense)	$98.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	$9.9
Fish Production Total		$45.5	$45.5	$46.5	$46.5	$47.5	$47.5	$47.5	$47.5	$47.5	$47.5	$469.1
Habitat												
Continuing Cost	$12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	$121.0
Land Protection Cost	$404.2	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	$40.4
Instream Flow Improvement Cost	$34.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	$3.4
Enhancement & Restoration Cost	$625.8	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	$62.6
Annual Habitat O&M	0.00%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	$0.0
Assessments	$0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	$0.0
Additional "Small" Tributary Passage (Expense)	$187.4	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	$18.7
Additional "Major" Tributary Passage (Capital)	$21.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	$2.1
Additional Tributary Passage O&M	0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	$0.0
Additional Wildlife Mitigation	$300.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	$30.0
Additional Wildlife O&M	0.00%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	$0.0
Habitat Total		$27.8	$27.8	$27.8	$27.8	$27.8	$27.8	$27.8	$27.8	$27.8	$27.8	$278.3
TOTAL Cost without Borrowing *($M/yr)*	$1,419.6	$140.6	$140.6	$141.6	$141.6	$142.6	$142.6	$142.6	$142.6	$142.6	$142.6	$1,419.6
TOTAL Cost with Borrowing *($M/yr)*	$1,356.0	$134.2	$134.2	$135.2	$135.2	$136.2	$136.2	$136.2	$136.2	$136.2	$136.2	$1,356.0
TOTAL with inflation		$140.6	$145.0	$150.6	$155.4	$161.5	$166.6	$171.9	$177.3	$183.0	$188.8	$1,640.7

ACHIEVEMENT TARGETS (10 Year)	Mtn Columbia	Inter Mtn	Mtn Snake	Blue Mtn	U&M Snake	Columbia Cascade	Plateau	Columbia Gorge	Lo. Col. & Estuary	Basin Totals
New Production Facilities										
Number per Province	1	3		1	1	4	2	1		13
Habitat										
Acres purchased	4,000	40	10,000	0	7,000	4,000	3,000	45	0	28,085
Acres leased	0	0	1,300	500	2,000	4,500	11,140	1,040	0	20,480
Miles of fence	80	0	660	100	580	35	68	73	0	1,596
Acre-Feet of Water Purchased	0	0	0	0	0	18	50	0	0	68
Acres planted	40	0	3,010	500	30,400	90	177	357	0	34,574
Miles of Road Obliterated	60	0	2,820	400	20	20	30	93	0	3,443
Acres Treated for Weeds	0	0	31,370	10,500	0	0	0	0	0	41,870
Miles of Instream Improvements	30	38	630	100	410	30	57	21	0	1,316
Number of Barriers Removed	10	0	780	85	140	7	61	10	0	1,093
Number of Diversions Screened	15	0	0	4	70	23	10	0	0	122
Number of Sites Monitored	117	50	0	0	20	5	50	0	0	242

APPENDIX 2: BPA Fish and Wildlife Program: Twenty-six Years of Funding (1978-2003)

[CBFWA Draft April 27, 2004]

Introduction

The purpose of this paper is to describe the Bonneville Power Administration's (BPA) historic funding for fish and wildlife. The Fiscal Year (FY) 2003 budget is the twenty-sixth since BPA started to include fish and wildlife costs in their operations budget. This paper is intended to provide a comprehensive, consistent view of past spending and serve as a basis for discussing future fish and wildlife budget needs. Generally, the paper relies on information provided by BPA with references presented to specific sources.

A Brief History

In 1978, the BPA hired its first fish and wildlife staff and started funding fish and wildlife activities. Prior to then, BPA paid for fish facilities at Federal Columbia River Hydropower System (FCRPS) dams, such as fish ladders, screens and bypass facilities, and mitigation facilities, such as fish hatcheries. These payments were to the U.S. Treasury for fish facility expenditures by the Army Corps of Engineers (COE), the Bureau of Reclamation (BOR), and the Fish and Wildlife Service (USFWS)

In December of 1980, Congress passed the Northwest Power Planning and Electric Conservation Act (NW Power Act) that established an additional obligation on BPA to pay for more extensive mitigation for the FCRPS. The NW Power Act established the Northwest Power Planning Council (later called the Northwest Power and Conservation Council or NPCC). The NW Power Act directed the NPCC to adopt a fish and wildlife program to guide BPA fish and wildlife mitigation funding. As the budgets became more complex, BPA began dividing their Fish and Wildlife Program costs into four categories:

1) Capital Investments;
2) Reimbursed Expenses of Other Agencies;
3) Integrated (Direct) Program Expenses; and,
4) River Operations.

On March 2, 1995, the National Oceanic and Atmospheric Administration (NOAA) Fisheries issued the 1995 FCRPS Biological Opinion. In that opinion, NOAA Fisheries determined that the proposed operation of the FCRPS would jeopardize the continued existence of threatened and endangered Snake River spring/summer chinook, fall chinook, and sockeye salmon and would adversely affect their critical habitat. The 1995 FCRPS Biological Opinion, therefore, established a set of Reasonable and Prudent Alternatives (RPA) for the operation and configuration of the hydrosystem to satisfy ESA

Section 7(a)(2) requirements. The RPA prescribes measures to increase the survival of listed salmonids and initiated the development of long-term system configuration plan.

Faced with increasing fish and wildlife costs and the prospect of further increases resulting from the implementation of the 1995 Biological Opinion, BPA and its federal partners entered into a Memorandum of Agreement (MOA) governing BPA's fish and wildlife budgets. The MOA set targets for the four BPA budget categories, for Fiscal Years 1996 through 2001. The MOA also set procedures for managing the budget in a more publicly accessible process.

On May 14, 1998, NOAA Fisheries issued the 1998 Supplemental FCRPS Biological Opinion. That ESA Section 7 consultation evaluated the effects of configuration and operations of the FCRPS on newly listed threatened and endangered steelhead in the Upper Columbia River, Snake River, and Lower Columbia River Ecologically Significant Units.

In the 1998 Supplemental FCRPS Biological Opinion, NOAA Fisheries determined that operating the FCRPS in accordance with the Action Agencies' proposed plan, including the measures specified in the RPA of the 1995 FCRPS Biological Opinion (the 1995 RPA), would not jeopardize the continued existence of the newly listed steelhead. The 1998 Supplemental FCRPS Biological Opinion established spring flow objectives at Priest Rapids Dam to protect juvenile fish and expanded the spill program at many mainstem hydro projects, but otherwise left the decision-making process and timing for the long term as described in the 1995 FCRPS Biological Opinion.

The NOAA Fisheries issued a last supplemental biological opinion on February 4, 2000. That opinion considered the effects of the FCRPS operations on the six species that NOAA Fisheries listed as threatened or endangered in March 1999. The NOAA Fisheries determined that implementation of the 1995 RPA, as modified by the 1998 proposed action and combined with a few additional interim measures, would not jeopardize the continued existence of any of the newly listed species for the rest of the interim period. The decision-making process and timing for the long-term, again, remained consistent with the 1995 FCRPS Biological Opinion.

The NOAA Fisheries based its 2000 FCRPS Biological Opinion on the premise that the operation of the hydroelectric dams jeopardized the listed anadromous salmonids and recommended a strategy of "aggressive offsite mitigation" to avoid a jeopardy finding and to put off a decision on breeching the lower four Snake River dams pending further study. Under this biological opinion, BPA could avoid provision of additional spill and flow for fish, as identified in previous biological opinions, by funding offsite habitat improvement projects.

In 2001, BPA set new rates for power sales in FY 2002-2006 that increased funding available for fish and wildlife from $252 million under the MOA to $352 million annually. This included $186 Million for the Integrated Program (combining $150 million in Expense and $36 million for Capital or borrowing authority), $62 million for

Reimbursed Expenses, and $104 for mainstem capital repayment. However, drought and the West Coast energy markets impacted BPA's budget and, with NPCC's concurrence, BPA reduced its Integrated Program budget target from $150 million for Expense to $139 million annually, where it remains today.

Figure 1 and Table 1 summarize the amounts that BPA has spent on its fish and wildlife program expenses from FY 1978 through FY 2003. (Table 1 is located at the end of this document.)

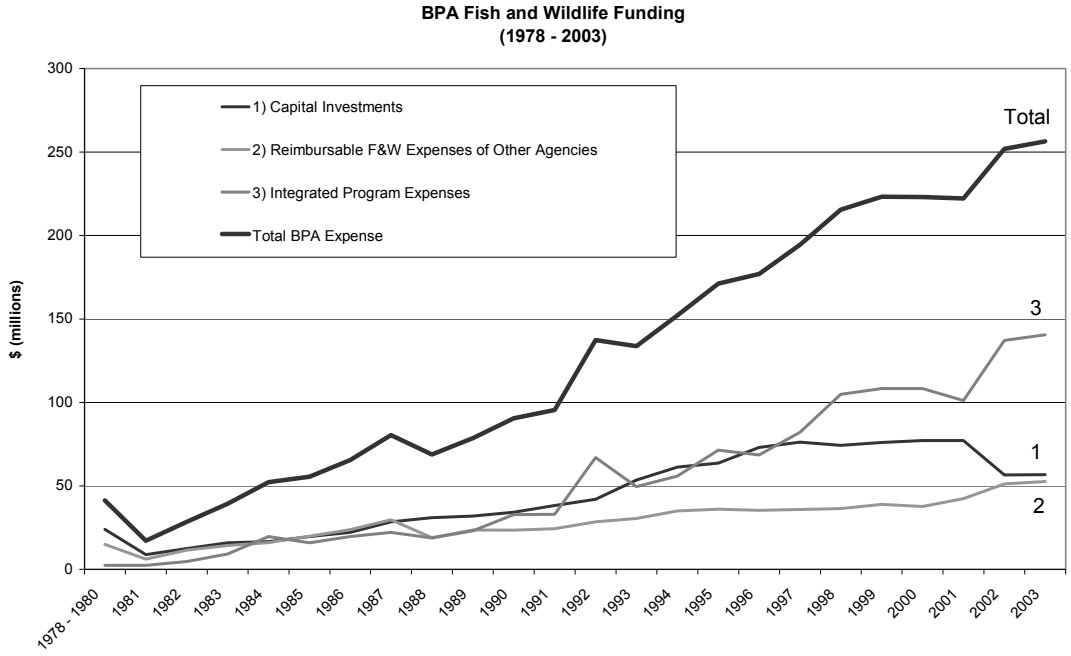


Figure 1. BPA fish and wildlife spending from 1978-2003 (in nominal dollars).

BPA Annual Expenditures

1) Capital Investments

BPA is obligated to repay the U.S. Treasury amortization, depreciation, and interest on funds borrowed by the COE and BOR for capital investments in fish facilities at dams built and operated by them. BPA's capital budget also repays funds borrowed to construct numerous hatcheries built as partial mitigation for the FCRPS. Other investments include salmon transport barges and improvements at the FCRPS dams for fish collection and passage, as well as planning, design, monitoring and research studies. The amount that Congress authorized the COE and BOR to spend each year is shown in Table 1 as is BPA's actual repayment amount.

Note that there is a distinction, often obscured, between the amount authorized and borrowed from the U.S. Treasury (analogous to the "mortgage") and the actual repayment cost (analogous to an annual "mortgage" payment). The amount borrowed is usually booked in the year construction starts, while repayment does not start until the facility is completed. As a general rule-of-thumb, the fixed costs of repayment are about one-tenth of the amount capitalized. The operation and maintenance costs of these facilities are generally included in category 2) Reimbursed Expenses of Other Agencies.

The costs for capital investments have remained steady since the adoption of the 1996-2001 Memorandum of Agreement. The MOA set targets for capital investment of $107 million annual average. The BPA's investments in this area under-spent the targets significantly, averaging $76 million annually, for a total under-investment of more than $188 million. For the past eight years, the annual appropriation for fixes at mainstem dams has averaged approximately $83.5 million. Since the adoption of the 2000 biological opinions, average annual spending has remained fairly constant with only a slight decrease.

Since 1985, BPA has identified the amounts to be capitalized in implementing its Integrated (Direct) Fish and Wildlife Program. Apparently in the early years of the program, BPA chose to pay this cost from revenues, rather than borrowing. The 1996-2001 MOA set $27 million as the annual target for capitalized projects in the Integrated Program. The line "Integrated Program" under Capital Investments in Table 1 shows the trend in this amount. Under the MOA, BPA capitalized an average of $20.2 million annually, under spending the target by about $40.8 million over the life of the MOA (Figure 2).

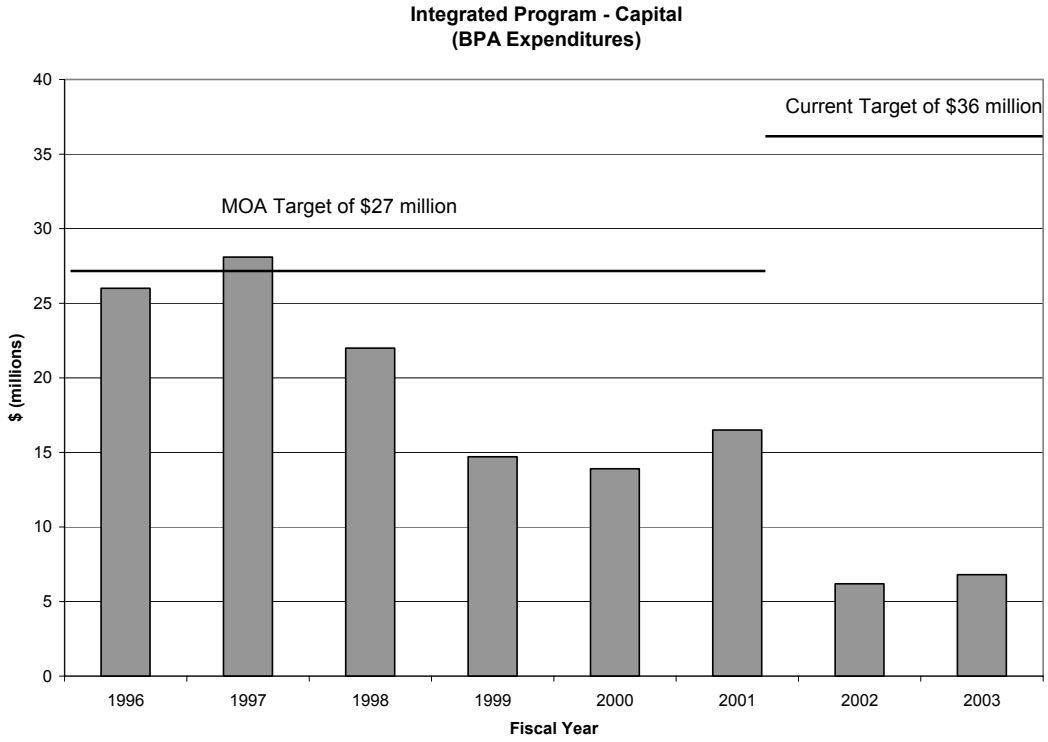


Figure 2. Actual capital borrowing in the Integrated Program from 1996-2003.

Capitalized amounts for the Integrated Program generally increased through 1997 when they reached $28.1 million. Since Congress granted BPA an additional $770 million in borrowing authority in 2001, BPA has capitalized an average of $6.5 million (Figure 2), even though its annual budget target has apparently increased to $36 million. This represents a $59 million shortfall in the two years since the expiration of the MOA.

Since adoption of the 2000 biological opinions, there has been an average decrease in capital borrowing for the Integrated Program of almost $15 million per year (Figure 2). Also, BPA's actual repayment costs dropped significantly since the end of the MOA (Table 1).

2) Reimbursed Expenses of Other Agencies

BPA repays the U.S. Treasury for the hydroelectric share of operation and maintenance budgets and other authorized non-capital expenditures for fish and wildlife activities by the COE, BOR and USFWS. These costs include those of the Lower Snake River Compensation Plan implementation and numerous hatcheries built to mitigate for the FCRPS. These facilities are often operated by the state fisheries management agencies. BPA also funds half of the NPCC's budget (currently $4.5 million annually) under this portion of its budget. BPA has relatively little control over these expenses, reimbursing the U.S. Treasury directly.

The Reimbursable category of the budget averaged $37.8 million annually under the MOA, close to the MOA annual budget target of $40 million. The operation and maintenance budgets have increased by more than one-third since the end of the MOA. Most of the increase appears to be related to a greater than 50 percent increase in COE and BOR operating budgets (Figure 3, Table 1).

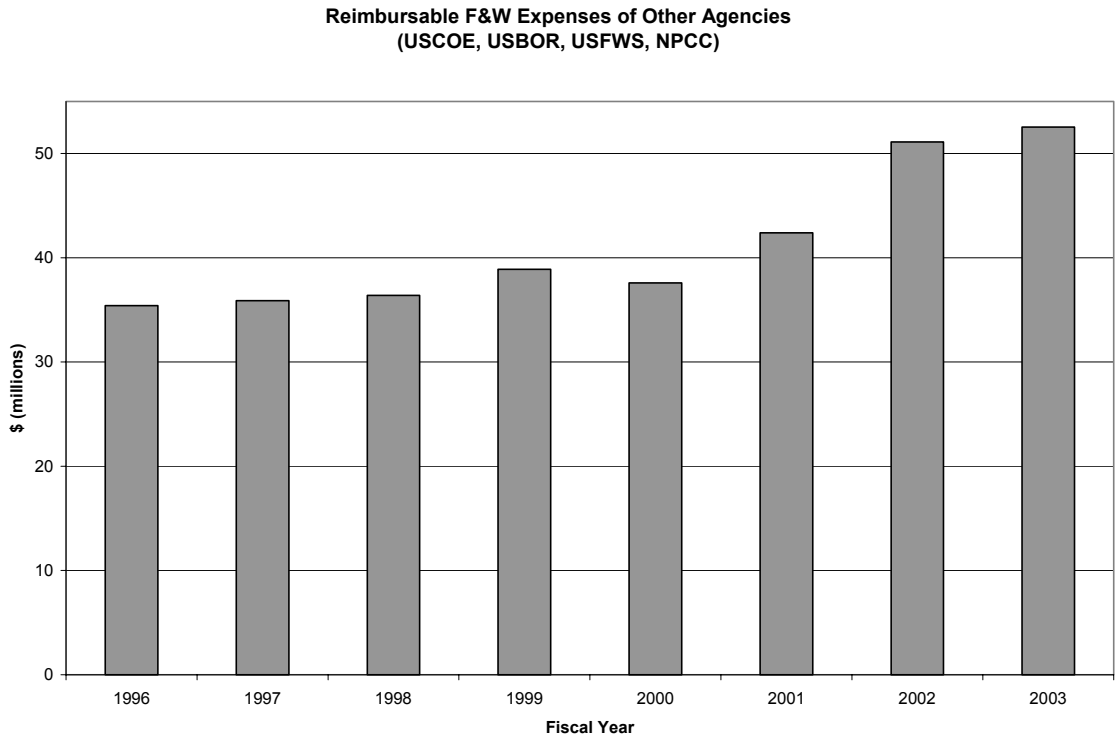


Figure 3. Reimbursable fish and wildlife expenses of other federal agencies.

3) Integrated (Direct) Program

The Integrated Program budget has two categories: Capital (discussed above) and Expense. The Expense portion of the Integrated Program has increased steadily since 1978. The MOA set an annual budget target of $100 million, with BPA spending averaging $95.5 million annually, a shortfall of $26.9 million. During the current rate period, the target for the Expense portion of the Integrated Program was set at $150 million and reduced to $139 million annually in 2003. Actual spending during the current rate period has averaged $139 million per year.

Although this appears to be an increase in funding of $39 million annually since the conclusion of the MOA, the program funding has not been adjusted for inflation for eight years exaggerating the true benefit of the additional funding. Further, BPA has rolled contracted obligations forward each year without shifting the associated funding, creating a "bow-wave" of unfunded obligations. A change in accounting practices in FY 2003 required elimination of $40 million worth of these carry-over obligations. In essence, BPA cut $40 million in obligations from the Integrated Program in FY 2003. BPA is

now considering cutting an additional $15 million from the Integrated Program over the period FY 2005-2006.

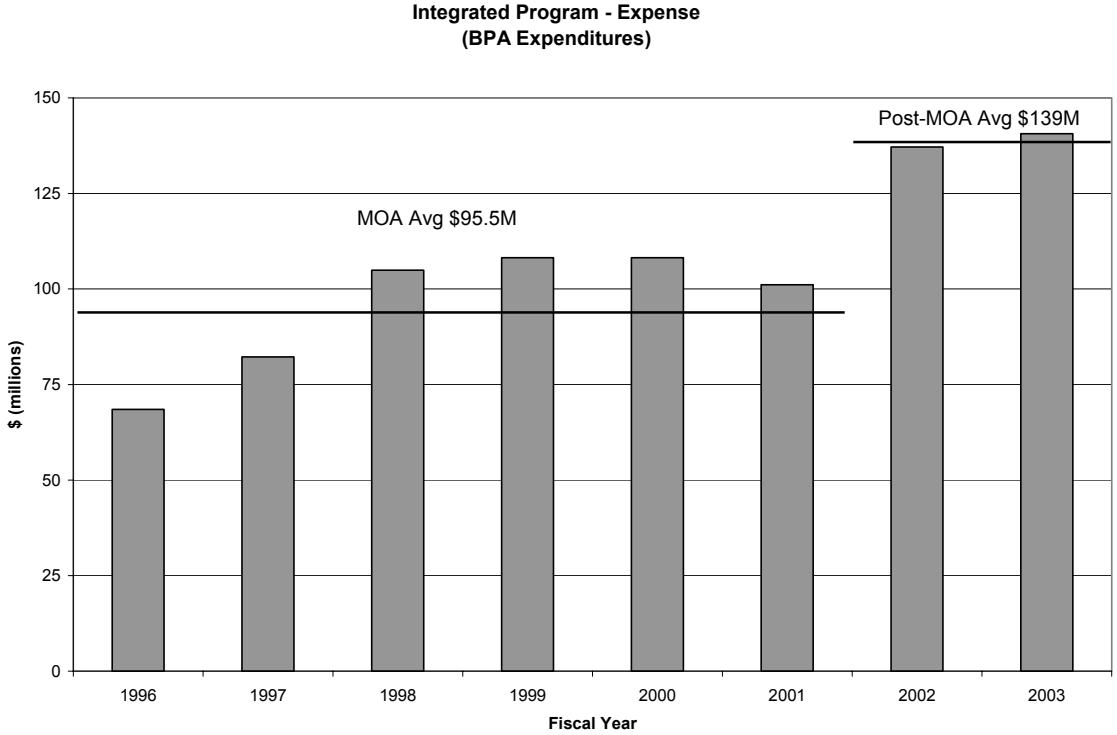


Figure 4. BPA spending in the Integrated Program from 1996-2004.

4) High Priority/Action Plan Funding

In addition to the regular funding of the Integrated Fish and Wildlife Program, BPA announced that it would augment its budget in 2001 by $10-20 million to partially offset the impacts from BPA's elimination of summer spill during the drought and to provide a boost in funding for projects that met immediate needs identified in the 2000 biological opinions. BPA held two separate solicitations, titled "High Priority" and "Action Plan" and received about 108 project proposals. The fish and wildlife managers (CBFWA), independent scientists (ISRP), NOAA, and the public reviewed the proposals and the NPCC recommended funding approximately 30 proposals for a total of approximately $38 million. BPA spent $15.1 million, over three years, to fund 25 projects in this category of funding (Table 1).

River Operations

The fish and wildlife costs associated with operating the hydropower system are of a fundamentally different nature than those discussed above. Operational costs represent the value of electricity that might have been generated by water provided as spill or power purchased to replace or provide flows for fish. This is very different from actual

cash outlays to pay for fish and wildlife investments or expenses. The operational "costs" are derived in two ways, depending on the circumstances: revenue foregone and power purchases. BPA calculates revenue foregone by estimating the difference between a base-case value of power that might have been generated absent operational changes to benefit fish and that which was actually generated.

BPA estimates power purchases as the cost of power purchased to meet BPA contracts when hydro-operations are reduced by fish requirements and the system is not able to meet contract needs. Power purchases result from BPA contracting to sell more power than the hydro-system can reliably provide. BPA does not de-rate the hydro power system to fully account for required fish constraints, as they do for other operational constraints such as irrigation, navigation, municipal water supplies and recreation. When river flows are not adequate to meet all of the demands of the river, BPA in essence "charges" the salmon for power purchases necessary to meet its hydro-electricity contracts.

Table 2 and Figure 5 detail BPA's estimates of these "lost opportunity" costs and shows that over the last 26 years they total more than $3.7 billion with almost 40 percent of the total occurring in 2001.

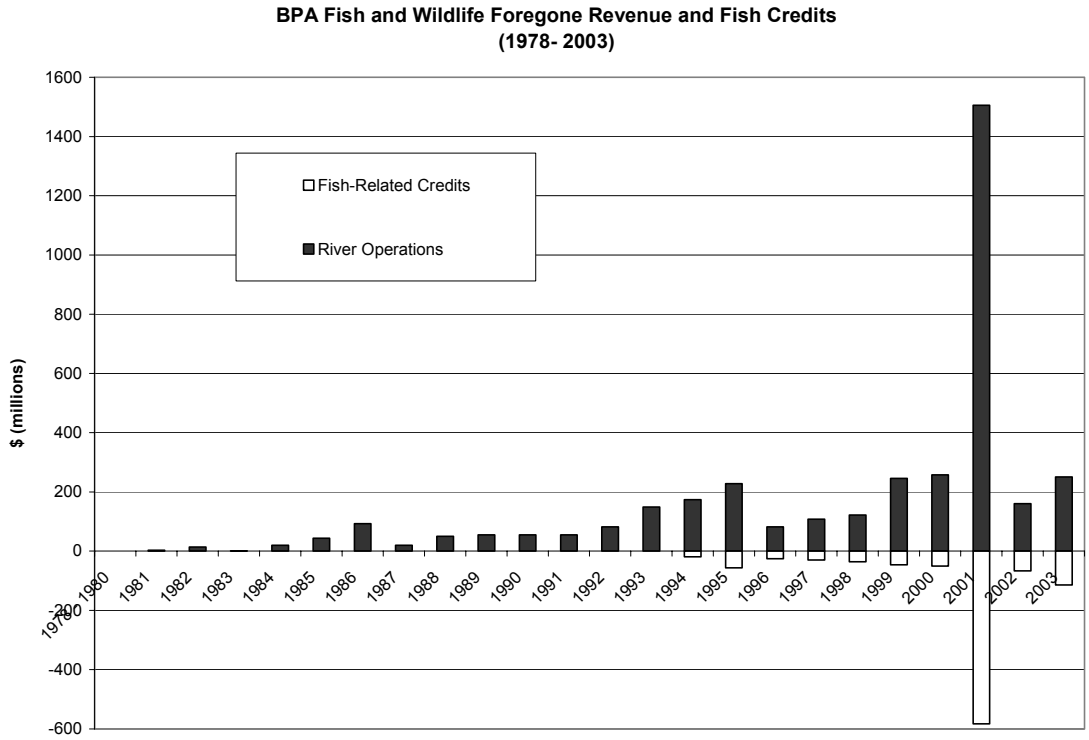


Figure 5. BPA estimated cost of river operations and benefits of fish credits from 1978 – 2003.

In Figure 5 and Table 2, fiscal year 2001 appears to be an anomaly. The operational costs were based on reduced reservoir levels at the start of the 2001 water year combined with wildly inflated electricity prices in the second quarter of the 2001 during the West Coast energy crisis. Essentially no river operations for fish occurred during 2001. BPA declared a financial emergency and shut off summer spill, opting to generate power valued at approximately $500 million, to help pay for its financial crisis. Yet in BPA's accounting for the costs of meeting its fish and wildlife obligations, it does not credit the revenue benefits back to the fish and wildlife program.

Two aspects of these lost (power) opportunity costs should be kept in mind. First, other mandated uses of the river also limit hydropower generation. For example, BPA recently estimated in their sounding board discussions that irrigation use costs BPA about $180 million annually in revenue foregone and power purchase costs. Similar estimates could be made for the costs of lost opportunities to generate power as a result of flood control, navigation, or operations to benefit the annual Richland Washington hydroplane races. The spill and flow requirements for salmon were set by the 1995 and 2000 biological opinions and the 1994 Fish and Wildlife Program, and are not discretionary except in emergencies. BPA does not consider implementation of flow and spill for fish as a cost of doing business and has not de-rated the generating capability of the FCRPS accordingly, as they have done to account for other constraints to generation.

Second, it is argued that these other uses of the river provide real (monetary) benefits that outweigh the costs of lost generation. Fish and wildlife provide real (and monetary) benefits, as well. One calculation (CBFWA, 2003), based on the 1987 NPCC Fish and Wildlife Program assumptions, estimates that the presence and operation of hydropower system results in about 8 million salmon that do not return, in essence, salmon "foregone." At a value to local economies of about $400 per fish caught, this would result in about $1 billion in revenue foregone each year from the salmon based industry of the Pacific Northwest.

Fish Credits

BPA estimates the costs of salmon operations in detail because the NW Power Act allows BPA to take credits towards their annual U.S. Treasury repayment (currently equal to 27 percent of the calculated power generation impacts). When it passed the NW Power Act, Congress realized that "equitable treatment" of fish and wildlife with power generation would reduce generation and established two crediting mechanisms to reduce the rate impacts. Table 2 and Figure 5 provide the fish credits that BPA has used to partially off set its operational costs each year. Since BPA started taking these credits in 1994, it has reduced its U.S. Treasury repayments by more than $1 billion, more than half of it in 2001 to offset the impacts of the chaotic Western energy market and the drought.

Conclusions

- Over the last 26 years, BPA has spent about $2 billion ($79 million per year or 2.4% of BPA's annual budget) to meet fish and wildlife obligations (Table 1). This includes:
    - $1,071 million in repayment to the U.S. Treasury for funds borrowed to build fish passage facilities at the FCRPS and tributary dams and numerous salmon hatcheries to partially mitigate for the dams;
    - $687 million to reimburse the U.S. Treasury for the operation of these facilities;
    - $1,313 million expenses of the Integrated (Direct) F&W Program; and
    - $1,025 million in Treasury payment credits.

- Since adopting the 2000 FCRPS biological opinions, BPA's spending for fish and wildlife has increased from an annual average of $207 million during the preceding five years to an annual average of $244 million.
    - This apparent 18 percent increase is tempered by unaccounted-for inflation, a $12 million per year increase in COE and BOR operations costs at existing facilities, and an accounting write-off of about $40 million in Integrated Program obligations.
    - While BPA's spending for Integrated Program expenses has increased almost 34 percent since the adoption of the 2000 Biological Opinion, this is partially offset by a 53 percent decline in capital investments.

- BPA has estimated the opportunity costs of system operations to meet fish and wildlife mitigation obligations at about $3.77 billion over the last 26 years. Forty percent of this lost opportunity occurred as a result of the extraordinary conditions in 2001.
    - These opportunity costs have been offset by $1.03 billion in credits against its Treasury repayments effectively shifting 27 percent of this "cost" to the U.S. taxpayers. Further, during 2001, BPA generated about $500 million in power instead of providing spill required by the 2000 Biological Opinion. This should be credited as a foregone spill offset to its opportunity costs. Thus, using the above assumptions, BPA's net opportunity costs from fish and wildlife obligations is about $2.25 billion over the last 26 years, or less than $90 million annually.

- The MOA specified rules that provided for any unspent funds within the MOA to be carried forward each year and made available for fish and wildlife projects, even after the MOA expired, stating: "*Any funds remaining in these accounts after the close of Fiscal Year 2001 will not be re-programmed for any non-fish and wildlife use, but will remain available for expenditure for the benefit of fish and wildlife"* (MOA Section VIII(h)).
    - However, when the MOA expired, BPA failed to carry forward or continue to make available $226 million of unspent funds, including

$188.4 million in the Capital category and $37.6 million from the Integrated (Direct) Program Expenses.

Table 1. Bonneville Power Adminstration (BPA) Fish and Wildlife Expenditures from 1978-2003[1] ($ in millions).

Fiscal Year	Actual 1978-1980	Actual 1981	Actual 1982	Actual 1983	Actual 1984	Actual 1985	Actual 1986	Actual 1987	Actual 1988	Actual 1989	Actual 1990	Actual 1991	Actual 1992	Actual 1993	Actual 1994	Actual 1995	Actual 1996	Actual 1997	Actual 1998	Actual 1999	Actual 2000	Actual 2001	Actual 2002	Actual 2003	Total 1978-2003
1) Capital Investments Fixed Expenses																									
Federal appropriated dollars	*30.0*	*17.9*	*61.7*	*55.1*	*9.0*	*46.4*	*9.1*	*78.6*	*7.6*	*5.3*	*4.5*	*12.0*	*4.7*	*162.0*	*63.0*	*48.0*	*86.9*	*82.4*	*102.2*	*72.3*	*74.9*	*94.1*	*73.2*	*82.3*	*1,283.2*
Integrated Program	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*10.2*	*8.0*	*4.7*	*7.7*	*8.3*	*16.2*	*17.7*	*11.2*	*17.3*	*20.5*	*32.5*	*26.0*	*28.1*	*22.0*	*14.7*	*13.9*	*16.5*	*6.2*	*6.8*	*288.5*
Actual	**24.0**	**8.8**	**12.4**	**15.9**	**16.6**	**19.7**	**22.1**	**28.5**	**31.0**	**31.9**	**34.3**	**38.2**	**41.9**	**53.6**	**61.3**	**63.6**	**73.0**	**76.3**	**74.2**	**76.1**	**77.2**	**77.1**	**56.6**	**56.7**	**1,071.0**
2) Reimbursable F&W Expenses of Other Agencies																									
Actual	**15.0**	**6.1**	**11.5**	**14.2**	**16.0**	**19.9**	**23.7**	**29.7**	**19.0**	**23.6**	**23.4**	**24.3**	**28.4**	**30.5**	**34.9**	**36.1**	**35.4**	**35.9**	**36.4**	**38.9**	**37.6**	**42.4**	**51.1**	**52.5**	**686.5**
3) Integrated Program Expenses																									
Actual	**2.3**	**2.3**	**4.6**	**9.1**	**19.6**	**15.9**	**19.6**	**22.2**	**18.8**	**23.0**	**32.8**	**33.0**	**67.0**	**49.6**	**55.9**	**71.4**	**68.5**	**82.2**	**104.9**	**108.2**	**108.2**	**101.1**	**137.1**	**140.6**	**1,297.9**
4) High Priority/Action Plan Expenses																									
Actual																						**1.5**	**7.1**	**6.5**	**15.1**
Total BPA Expenses	**41.3**	**17.2**	**28.5**	**39.2**	**52.2**	**55.5**	**65.4**	**80.4**	**68.8**	**78.5**	**90.5**	**95.5**	**137.3**	**133.7**	**152.1**	**171.1**	**176.9**	**194.4**	**215.5**	**223.2**	**223.0**	**222.1**	**251.9**	**256.3**	**3,070.5**

Table 2. Bonneville Power Adminstration (BPA) River Operations and Fish Credits from 1978-2003[1] ($ in millions).

Fiscal Year	Actual 1978-1980	Actual 1981	Actual 1982	Actual 1983	Actual 1984	Actual 1985	Actual 1986	Actual 1987	Actual 1988	Actual 1989	Actual 1990	Actual 1991	Actual 1992	Actual 1993	Actual 1994	Actual 1995	Actual 1996	Actual 1997	Actual 1998	Actual 1999	Actual 2000	Actual 2001	Actual 2002	Actual 2003	Total 1978-2003
River Operations																									
Power Purchases	0.0	0.0	0.0	0.0	12.0	17.0	74.0	11.0	40.0	40.0	40.0	40.0	59.0	104.0	111.7	114.0	0.0	0.0	5.4	47.6	64.8	1,389.6	147.8	171.1	2,489.0
Foregone Revenues	0.0	3.0	14.0	1.0	8.0	27.0	19.0	9.0	10.0	15.0	15.0	15.0	23.0	45.0	62.0	114.0	81.7	107.8	116.5	197.8	193.1	115.9	12.6	79.2	1,284.6
Actual	**0.0**	**3.0**	**14.0**	**1.0**	**20.0**	**44.0**	**93.0**	**20.0**	**50.0**	**55.0**	**55.0**	**55.0**	**82.0**	**149.0**	**173.7**	**228.0**	**81.7**	**107.8**	**121.9**	**245.4**	**257.9**	**1,505.5**	**160.4**	**250.3**	**3,773.6**
Fish-Related Credits																									
NPA 4(h)(10)(C)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-18.7	-56.3	-25.5	-29.7	-35.7	-46.0	-50.4	-336.6	-66.4	-35.4	-700.7
Fish Cost Contingency Fund	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-246.5	0.0	-78.7	-325.2
Total	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**-18.7**	**-56.3**	**-25.5**	**-29.7**	**-35.7**	**-46.0**	**-50.4**	**-583.1**	**-66.4**	**-114.1**	**-1,025.9**

1 - Data for thess tables was obtained from the following web links and from Val Leffler, BPA, and John Kranda, USCOE, personal communications (http://www.efw.bpa.gov/EW/FISCAL/congressional.budgets.1978-95.pdf and http://www.efw.bpa.gov/EW/FISCAL/MOAFinal2001.pdf).